# This Page Is Inserted by IFW Operations and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

## 025CIP SEQ List.txt SEQUENCE LISTING

ļ

• • • • • • • • • • • • • • • • • • • •	•
<110> AviGenics, Inc	
<120> Avian Integrase-mediated Transformation	
<130> A181 1080.1	
<160> 12	
<170> PatentIn version 3.2	
<210> 1 <211> 6230 <212> DNA <213> Plasmid pCMV-31int	
<400> 1 cattcgccat tcaggctgcg caactgttgg gaagggcgat cggtgcgggc ctcttcgcta	60
ttacgccagc caatacgcaa accgcctctc cccgcgcgtt ggccgattca ttaatgcagg	120
atcgatccag acatgataag atacattgat gagtttggac aaaccacaac tagaatgcag	180
tgaaaaaaaa gctttatttg tgaaatttgt gatgctattg ctttatttgt aaccattata	240
agctgcaata aacaagttaa caacaacaat tgcattcatt ttatgtttca ggttcagggg	300
gaggtgtggg aggttttta aagcaagtaa aacctctaca aatgtggtat ggctgattat	360
gatcatgaac agactgtgag gactgagggg cctgaaatga gccttgggac tgtgaatcta	420
aaatacacaa acaattagaa tcactagctc ctgtgtataa tattttcata aatcatactc	480
agtaagcaaa actctcaagc agcaagcata tgcagctagt ttaacacatt atacacttaa	540
aaattttata tttaccttag agctttaaat ctctgtaggt agtttgtcca attatgtcac	600
accacagaag taaggttcct tcacaaagat cccaagctag cttataatac gactcactat	660
agggagagag ctatgacgtc gcatgcacgc gtaagcttgg gcccctcgag ggatccgggt	720
gtctcgctac gccgctacgt cttccgtgcc gtcctgggcg tcgtcttcgt cgtcgtcggt	780
cggcggcttc gcccacgtga tcgaagcgcg cttctcgatg ggcgttccct gcccctgcc	840
cgtagtcgac ttcgtgacaa cgatcttgtc tacgaagagc ccgacgaaca cgcgcttgtc	900
gtctactgac gcgcgccccc accacgactt agggccggtc gggtcagcgt cggcgtcttc	960
ggggaaccat tggtcaaggg gaagcttcgg ggcttcggcg gcttcaagtt cggcaagccg	1020
ctcttccgcc ccttgctgcc ggagcgtcag cgctgcctgt tgcttccgga agtgcttcct	1080
gccaacgggt ccgtcgtacg cgcctgccgc gcggtcttcg tacagctctt caagggcgtt	1140
cagggcgtcg gcgcgctccg caacaaggtt cgcccgttcg ccgctcttct caggcgcctc	1200
agtgagcttg ccgaagcgtc gggcggcttc ccacagaagc gccaacgtct cttcgtcgcc	1260
ttcggcgtgc ctgatcttgt tgaagatgcg ttccgcaacg aacttgtcga gtgccgccat	1320
gctgacgttg cacgtgcctt cgtgctgccc aggtgcggac gggtcgacca ccttccggcg Page 1	1380

acggcagcgg	taagagtcct	tgatcgatto	ttccccgcg	ttcgaagtca	tgacggcgcc	1440
acactcgcag	tacagcttgt	ccatggcgga	cagaatggct	tgccccggg	aaagcccctt	1500
gccgcgcccc	ctgccgtcca	accacgcctg	aagctcatad	cactcagcgg	gctcgatgat	1560
cggtccgcaa	tcaagctcga	ccggccggag	cgtgatcggg	tcgcgctgaa	tgcggtaacc	1620
ctcaatcttc	gtggtcggcg	tgccgtccgg	cttcttcttg	tagatcacct	cagcggcgaa	1680
gcccgcaata	cgcgggtccc	gaaggattcg	cataacggtt	gccgggtccc	aggcgcttga	1740
agcggtcttc	ttcccaatcg	tctcgccccg	ggtcggcacg	gcgtcagcgt	ccatgcgctt	1800
					tgaagggaag	1860
					cgaactcgaa	1920
gggtccggta	aggggagtgg	tcgagtgcgc	aagcttgttg	atgacgacat	tgaccattcg	1980
gccgttgcgc	gtgatctcct	tcgtctccga	aacaagctcg	aagccgtaag	gcgccttccc	2040
gccgacgtac	ccgcccaatt	cgcgctgaag	gttcttcgtg	tcgagaatct	tcgccgactt	2100
cagcgaagat	tctttgtgcg	acgcgtcgag	ccgcataatc	aggtgaatca	ggtccatgac	2160
gtttccctgc	cggaagacgc	cttcctgagt	ggaaacaatc	gtcacgccca	gggcgagcaa	2220
ttccgagaca	atcggaatcg	cgtccatgac	cttcaggcgc	gagaagcgcg	acacgtcata	2280
gacaatgatc	atgttgagcc	gcccggcgcg	gcattcgttc	aggatgcgtt	cgaactccgg	2340
gcgctccgcc	gtcccgaacg	ccgacgtgcc	cggcgcttcg	ctgaaatgcc	cgacgaacct	2400
gaaccggccc	ccgtcgcgct	cgacttcgcg	ctgaaggtcg	gccgccttgt	cttcgttggc	2460
gctacgctgt	gtcgctgggc	ttgctgcgct	cgaattctcg	cgctcgcgcg	actgacggtc	2520
gtaagcaccc	gcgtacgtgt	ccaccccggt	cacaacccct	tgtgtcatgt	cggcgaccct	2580
acgactagtg	agctcgtcga	cccgggaatt	ccggaccggt	acctgcaggc	gtaccttcta	2640
tagtgtcacc	taaatagctt	tttgcaaaag	cctaggctag	agtccggagg	ctggatcggt	2700
cccggtgtct	tctatggagg	tcaaaacagc	gtggatggcg	tctccaggcg	atctgacggt	2760
tcactaaacg	agctctgctt	atatagacct	cccaccgtac	acgcctaccg	cccatttgcg	2820
tcaatggggc	ggagttgtta	cgacattttg	gaaagtcccg	ttgattttgg	tgccaaaaca	2880
aactcccatt	gacgtcaatg	gggtggagac	ttggaaatcc	ccgtgagtca	aaccgctatc	2940
cacgcccatt	gatgtactgc	caaaaccgca	tcaccatggt	aatagcgatg	actaatacgt	3000
agatgtactg	ccaagtagga	aagtcccata	aggtcatgta	ctgggcataa	tgccaggcgg	3060
gccatttacc	gtcattgacg	tcaatagggg	gcgtacttgg	catatgatac	acttgatgta	3120
ctgccaagtg	ggcagtttac	cgtaaatact	ccacccattg	acgtcaatgg	aaagtcccta	3180
ttggcgttac	tatgggaaca	tacgtcatta	ttgacgtcaa	tgggcggggg	tcgttgggcg	3240

025CIP SEQ List.txt	
gtcagccagg cgggccattt accgtaagtt atgtaacgac ctgcacgatg ctgtttcctg	3300
tgtgaaattg ttatccgctc acaattccac acattatacg agccggaagc tataaagtgt	3360
aaagcctggg gtgcctaatg agtgaaaggg cctcgtatac gcctattttt ataggttaat	3420
gtcatgataa taatggtttc ttagacgtca ggtggcactt ttcgggggaaa tgtgcgcgga	3480
acccctattt gtttattttt ctaaatacat tcaaatatgt atccgctcat gagacaataa	3540
ccctgataaa tgcttcaata atattgaaaa acgcgcgaat tgcaagctct gcattaatga	3600
atcggccaac gcgcggggag aggcggtttg cgtattgggc gctcttccgc ttcctcgctc	3660
actgactcgc tgcgctcggt cgttcggctg cggcgagcgg tatcagctca ctcaaaggcg	3720
gtaatacggt tatccacaga atcaggggat aacgcaggaa agaacatgtg agcaaaaggc	3780
cagcaaaagg ccaggaaccg taaaaaggcc gcgttgctgg cgtttttcca taggctccgc	3840
cccctgacg agcatcacaa aaatcgacgc tcaagtcaga ggtggcgaaa cccgacagga	3900
ctataaagat accaggcgtt tccccctgga agctccctcg tgcgctctcc tgttccgacc	3960
ctgccgctta ccggatacct gtccgccttt ctcccttcgg gaagcgtggc gctttctcaa	4020
tgctcacgct gtaggtatct cagttcggtg taggtcgttc gctccaagct gggctgtgtg	4080
cacgaacccc ccgttcagcc cgaccgctgc gccttatccg gtaactatcg tcttgagtcc	4140
aacccggtaa gacacgactt atcgccactg gcagcagcca ctggtaacag gattagcaga	4200
gcgaggtatg taggcggtgc tacagagttc ttgaagtggt ggcctaacta cggctacact	4260
agaaggacag tatttggtat ctgcgctctg ctgaagccag ttaccttcgg aaaaagagtt	4320
ggtagctctt gatccggcaa acaaaccacc gctggtagcg gtggtttttt tgtttgcaag	4380
cagcagatta cgcgcagaaa aaaaggatct caagaagatc ctttgatctt ttctacgggg	4440
tctgacgctc agtggaacga aaactcacgt taagggattt tggtcatgcc ataacttcgt	4500
atagcataca ttatacgaag ttatggcatg agattatcaa aaaggatctt cacctagatc	4560
cttttaaatt aaaaatgaag ttttaaatca atctaaagta tatatgagta aacttggtct	4620
gacagttacc aatgcttaat cagtgaggca cctatctcag cgatctgtct atttcgttca	4680
tccatagttg cctgactccc cgtcgtgtag ataactacga tacgggaggg cttaccatct	4740
ggccccagtg ctgcaatgat accgcgagac ccacgctcac cggctccaga tttatcagca	4800
ataaaccagc cagccggaag ggccgagcgc agaagtggtc ctgcaacttt atccgcctcc	4860
atccagtcta ttaattgttg ccgggaagct agagtaagta gttcgccagt taatagtttg	4920
cgcaacgttg ttgccattgc tacaggcatc gtggtgtcac gctcgtcgtt tggtatggct	4980
tcattcagct ccggttccca acgatcaagg cgagttacat gatcccccat gttgtgcaaa	5040
aaagcggtta gctccttcgg tcctccgatc gttgtcagaa gtaagttggc cgcagtgtta	5100
tcactcatgg ttatggcagc actgcataat tctcttactg tcatgccatc cgtaagatgc Page 3	5160

			5 <u>-</u> -Q	LIJCICAC		
ttttctgtg	a ctggtgagta	a ctcaaccaa	g tcattctgag	g aatagtgta	gcggcgaccg	5220
agttgctct	t gcccggcgt	c aatacggga1	taataccgcgd	cacatagca	aactttaaaa	5280
gtgctcatc	a ttggaaaac	; ttcttcgggg	g cgaaaactct	: caaggatcti	accgctgttg	5340
agatccagt	t cgatgtaaco	cactcgtgca	cccaactgat	cttcagcato	ttttactttc	5400
accagcgtt	t ctgggtgagd	aaaaacagga	aggcaaaatg	ccgcaaaaa	gggaataagg	5460
gcgacacgg	a aatgttgaat	actcatacto	ttcctttttc	aatattatto	aagcatttat	5520
cagggttat	t gtctcatgco	aggggtggg	acacatattt	gataccagcg	atccctacac	5580
agcacataa <sup>.</sup>	t tcaatgcgad	ttccctctat	cgcacatctt	agacctttat	tctccctcca	5640
gcacacatc	g aagctgccga	gcaagccgtt	ctcaccagtc	caagacctgg	catgagcgga	5700
tacatattt	g aatgtattta	gaaaaataaa	caaatagggg	ttccgcgcac	atttccccga	5760
aaagtgcca	ctgaaattgt	aaacgttaat	attttgttaa	aattcgcgtt	aaatttttgt	5820
taaatcagci	catttttaa	ccaataggcc	gaaatcggca	aaatccctta	taaatcaaaa	5880
gaatagacco	agatagggtt	gagtgttgtt	ccagtttgga	acaagagtcc	actattaaag	5940
aacgtggact	ccaacgtcaa	agggcgaaaa	accgtctatc	agggcgatgg	cccactacgt	6000
gaaccatcac	cctaatcaag	ttttttgggg	tcgaggtgcc	gtaaagcact	aaatcggaac	6060
cctaaaggga	gcccccgatt	tagagcttga	cggggaaagc	cggcgaacgt	ggcgagaaag	6120
gaagggaaga	aagcgaaagg	agcgggcgct	agggcgctgg	caagtgtagc	ggtcacgctg	6180
cgcgtaacca	ccacacccgc	cgcgcttaat	gcgccgctac	agggcgcgtc		6230
		uc-attB				
<400> 2 ctctatcgat	aggtaccgag	ctcttacgcg	tgctagccct	cgagcaggat	ctatacattg	60
	ggcaattagc					120
	tgcatacgtt					180
ccaatatgac	cgccatgttg	acattgatta	ttgactagtt	attaatagta	atcaattacg	240
gggtcattag	ttcatagccc	atatatggag	ttccgcgtta	cataacttac	ggtaaatggc	300
ccgcctggct	gaccgcccaa	cgacccccgc	ccattgacgt	caataatgac	gtatgttccc	360
	caatagggac					420
gcccacttgg	cagtacatca	agtgtatcat	atgccaagtc	cgccccctat	tgacgtcaat	480
gacggtaaat	ggcccgcctg	gcattatgcc	cagtacatga	ccttacggga	ctttcctact	540
	tctacgtatt					600

atcaatgggc gtggatagcg gtttgactca cggggatttc caagtctcca ccccattgac	660
gtcaatggga gtttgttttg gcaccaaaat caacgggact ttccaaaatg tcgtaacaac	720
tccgccccat tgacgcaaat gggcggtagg cgtgtacggt gggaggtcta tataagcaga	780
gctcgtttag tgaaccgtca gatcgcctgg agacgccatc cacgctgttt tgacctccat	840
agaagacacc gggaccgatc cagcctcccc tcgaagctcg actctagggg ctcgagatct	900
gcgatctaag taagcttggc attccggtac tgttggtaaa gccaccatgg aagacgccaa	960
aaacataaag aaaggcccgg cgccattcta tccgctggaa gatggaaccg ctggagagca	1020
actgcataag gctatgaaga gatacgccct ggttcctgga acaattgctt ttacagatgc	1080
acatatcgag gtggacatca cttacgctga gtacttcgaa atgtccgttc ggttggcaga	1140
agctatgaaa cgatatgggc tgaatacaaa tcacagaatc gtcgtatgca gtgaaaactc	1200
tcttcaattc tttatgccgg tgttgggcgc gttatttatc ggagttgcag ttgcgcccgc	1260
gaacgacatt tataatgaac gtgaattgct caacagtatg ggcatttcgc agcctaccgt	1320
ggtgttcgtt tccaaaaagg ggttgcaaaa aattttgaac gtgcaaaaaa agctcccaat	1380
catccaaaaa attattatca tggattctaa aacggattac cagggatttc agtcgatgta	1440
cacgttcgtc acatctcatc tacctcccgg ttttaatgaa tacgattttg tgccagagtc	1500
cttcgatagg gacaagacaa ttgcactgat catgaactcc tctggatcta ctggtctgcc	1560
taaaggtgtc gctctgcctc atagaactgc ctgcgtgaga ttctcgcatg ccagagatcc	1620
tatttttaac aatcaaatca	1680
cggttttgga atgtttacta cactcggata tttgatatgt ggatttcgag tcgtcttaat	1740
gtatagattt gaagaagagc tgtttctgag gagccttcag gattacaaga ttcaaagtgc	1800
gctgctggtg ccaaccctat tctccttctt cgccaaaagc actctgattg acaaatacga	1860
tttatctaat ttacacgaaa ttgcttctgg tggcgctccc ctctctaagg aagtcgggga	1920
agcggttgcc aagaggttcc atctgccagg tatcaggcaa ggatatgggc tcactgagac.	1980
tacatcagct attctgatta cacccgaggg ggatgataaa ccgggcgcgg tcggtaaagt	2040
tgttccattt tttgaagcga aggttgtgga tctggatacc gggaaaacgc tgggcgttaa	2100
tcaaagaggc gaactgtgtg tgagaggtcc tatgattatg tccggttatg taaacaatcc	2160
ggaagcgacc aacgccttga ttgacaagga tggatggcta cattctggag acatagctta	2220
ctgggacgaa gacgaacact tcttcatcgt tgaccgcctg aagtctctga ttaagtacaa	2280
aggctatcag gtggctcccg ctgaattgga atccatcttg ctccaacacc ccaacatctt	2340
cgacgcaggt gtcgcaggtc ttcccgacga tgacgccggt gaacttcccg ccgccgttgt	2400
tgttttggag cacggaaaga cgatgacgga aaaagagatc gtggattacg tcgccagtca	2460

#### 025CIP SEQ List.txt agtaacaacc gcgaaaaagt tgcgcggagg agttgtgttt gtggacgaag taccgaaagg 2520 tcttaccgga aaactcgacg caagaaaat cagagagatc ctcataaagg ccaagaaggg 2580 cggaaagatc gccgtgtaat tctagagtcg gggcggccgg ccgcttcgag cagacatgat 2640 aagatacatt gatgagtttg gacaaaccac aactagaatg cagtgaaaaa aatgctttat 2700 ttgtgaaatt tgtgatgcta ttgctttatt tgtaaccatt ataagctgca ataaacaagt 2760 taacaacaac aattgcattc attttatgtt tcaggttcag ggggaggtgt gggaggtttt 2820 ttaaagcaag taaaacctct acaaatgtgg taaaatcgat aaggatcaat tcggcttcag 2880 gtaccgtcga cgatgtaggt cacggtctcg aagccgcggt gcgggtgcca gggcgtgccc 2940 ttgggctccc cgggcgcgta ctccacctca cccatctggt ccatcatgat gaacgggtcg 3000 aggtggcggt agttgatccc ggcgaacgcg cggcgcaccg ggaagccctc gccctcgaaa 3060 ccgctgggcg cggtggtcac ggtgagcacg ggacgtgcga cggcgtcggc gggtgcggat 3120 acgcggggca gcgtcagcgg gttctcgacg gtcacggcgg gcatgtcgac agccgaattg 3180 atccgtcgac cgatgccctt gagagccttc aacccagtca gctccttccg gtgggcgcgg 3240 ggcatgacta tcgtcgccgc acttatgact gtcttcttta tcatgcaact cgtaggacag 3300 gtgccggcag cgctcttccg cttcctcgct cactgactcg ctgcgctcgg tcgttcggct 3360 gcggcgagcg gtatcagctc actcaaaggc ggtaatacgg ttatccacag aatcagggga 3420 taacgcagga aagaacatgt gagcaaaagg ccagcaaaag gccaggaacc gtaaaaaggc 3480 cgcgttgctg gcgtttttcc ataggctccg ccccctgac gagcatcaca aaaatcgacg 3540 ctcaagtcag aggtggcgaa acccgacagg actataaaga taccaggcgt ttcccctgg 3600 aagctccctc gtgcgctctc ctgttccgac cctgccgctt accggatacc tgtccgcctt 3660 tctcccttcg ggaagcgtgg cgctttctca atgctcacgc tgtaggtatc tcagttcggt 3720 gtaggtcgtt cgctccaagc tgggctgtgt gcacgaaccc cccgttcagc ccgaccgctg 3780 cgccttatcc ggtaactatc gtcttgagtc caacccggta agacacgact tatcgccact 3840 ggcagcagcc actggtaaca ggattagcag agcgaggtat gtaggcggtg ctacagagtt 3900 cttgaagtgg tggcctaact acggctacac tagaaggaca gtatttggta tctgcgctct 3960 gctgaagcca gttaccttcg gaaaaagagt tggtagctct tgatccggca aacaaaccac 4020 cgctggtagc ggtggttttt ttgtttgcaa gcagcagatt acgcgcagaa aaaaaggatc 4080 tcaagaagat cctttgatct tttctacggg gtctgacgct cagtggaacg aaaactcacg 4140 ttaagggatt ttggtcatga gattatcaaa aaggatcttc acctagatcc ttttaaatta 4200 aaaatgaagt tttaaatcaa tctaaagtat atatgagtaa acttggtctg acagttacca 4260 atgcttaatc agtgaggcac ctatctcagc gatctgtcta tttcgttcat ccatagttgc 4320 ctgactcccc gtcgtgtaga taactacgat acgggagggc ttaccatctg gccccagtgc 4380

Page 6

tgcaatgat ·	a ccgcgagaco	cacgctcaco	ggctccagat	ttatcagcaa	taaaccagcc	4440
agccggaag	g gccgagcgca	a gaagtggtco	tgcaacttta	tccgcctcca	tccagtctat	4500
taattgttg	c cgggaagcta	a gagtaagtag	ttcgccagtt	aatagtttgc	gcaacgttgt	4560
tgccattgc	t acaggcatco	g tggtgtcacg	ctcgtcgttt	ggtatggctt	cattcagctc	4620
cggttccca	a cgatcaaggo	gagttacatg	atcccccatg	ttgtgcaaaa	aagcggttag	4680
ctccttcgg	t cctccgatcg	ttgtcagaag	ı taagttggcc	gcagtgttat	cactcatggt	4740
tatggcagca	a ctgcataatt	ctcttactgt	catgccatcc	gtaagatgct	tttctgtgac	4800
tggtgagta	tcaaccaagt	cattctgaga	atagtgtatg	cggcgaccga	gttgctcttg	4860
cccggcgtca	a atacgggata	ataccgcgcc	acatagcaga	actttaaaag	tgctcatcat	4920
tggaaaacgt	tcttcggggc	gaaaactctc	aaggatctta	ccgctgttga	gatccagttc	4980
gatgtaacco	actcgtgcac	ccaactgatc	ttcagcatct	tttactttca	ccagcgtttc	5040
tgggtgagca	a aaaacaggaa	ggcaaaatgc	cgcaaaaaag	ggaataaggg	cgacacggaa	5100
atgttgaata	ctcatactct	tcctttttca	atattattga	agcatttatc	agggttattg	5160
tctcatgago	ggatacatat	ttgaatgtat	ttagaaaaat	aaacaaatag	gggttccgcg	5220
cacatttccc	cgaaaagtgc	cacctgacgc	gccctgtagc	ggcgcattaa	gcgcggcggg	5280
tgtggtggtt	acgcgcagcg	tgaccgctac	acttgccagc	gccctagcgc	ccgctccttt	5340
cgctttcttc	ccttcctttc	tcgccacgtt	cgccggcttt	ccccgtcaag	ctctaaatcg	5400
ggggctccct	ttagggttcc	gatttagtgc	tttacggcac	ctcgacccca	aaaaacttga	5460
ttagggtgat	ggttcacgta	gtgggccatc	gccctgatag	acggtttttc	gccctttgac	5520
gttggagtcc	acgttcttta	atagtggact	cttgttccaa	actggaacaa	cactcaaccc	5580
tatctcggtc	tattcttttg	atttataagg	gattttgccg	atttcggcct	attggttaaa	5640
aaatgagctg	atttaacaaa	aatttaacgc	gaattttaac	aaaatattaa	cgtttacaat	5700
ttcccattcg	ccattcaggc	tgcgcaactg	ttgggaaggg	cgatcggtgc	gggcctcttc	5760
gctattacgc	cagcccaagc	taccatgata	agtaagtaat	attaaggtac	gggaggtact	5820
tggagcggcc	gcaataaaat	atctttattt	tcattacatc	tgtgtgttgg	ttttttgtgt	5880
gaatcgatag	tactaacata	cgctctccat	caaaacaaaa	cgaaacaaaa	caaactagca	5940
aaataggctg	tccccagtgc	aagtgcaggt	gccagaacat	tt		5982
<210> 3						

<400> 3

ctctatcgat aggtaccgag ctcttacgcg tgctagccct cgagcaggat ctatacattg
Page 7

<sup>&</sup>lt;210> 3 <211> 5924 <212> DNA <213> Plasmid pCMV-luc-attP

aatcaatatt	ggcaattagc	catattagtc	attggttata	tagcataaat	caatattggc	120
tattggccat	tgcatacgtt	gtatctatat	cataatatgt	acatttatat	tggctcatgt	180
ccaatatgac	cgccatgttg	acattgatta	ttgactagtt	attaatagta	atcaattacg	240
gggtcattag	ttcatagccc	atatatggag	ttccgcgtta	cataacttac	ggtaaatggc	300
ccgcctggct	gaccgcccaa	cgacccccgc	ccattgacgt	caataatgac	gtatgttccc	360
atagtaacgc	caatagggac	tttccattga	cgtcaatggg	tggagtattt	acggtaaact	420
gcccacttgg	cagtacatca	agtgtatcat	atgccaagtc	cgcccctat	tgacgtcaat	480
gacggtaaat	ggcccgcctg	gcattatgcc	cagtacatga	ccttacggga	ctttcctact	540
tggcagtaca	tctacgtatt	agtcatcgct	attaccatgg	tgatgcggtt	ttggcagtac	600
atcaatgggc	gtggatagcg	gtttgactca	cggggatttc	caagtctcca	ccccattgac	660
gtcaatggga	gtttgttttg	gcaccaaaat	caacgggact	ttccaaaatg	tcgtaacaac	720
tccgccccat	tgacgcaaat	gggcggtagg	cgtgtacggt	gggaggtcta	tataagcaga	780
gctcgtttag	tgaaccgtca	gatcgcctgg	agacgccatc	cacgctgttt	tgacctccat	840
agaagacacc	gggaccgatc	cagcctcccc	tcgaagctcg	actctagggg	ctcgagatct	900
gcgatctaag	taagcttggc	attccggtac	tgttggtaaa	gccaccatgg	aagacgccaa	960
aaacataaag	aaaggcccgg	cgccattcta	tccgctggaa	gatggaaccg	ctggagagca	1020
actgcataag	gctatgaaga	gatacgccct	ggttcctgga	acaattgctt	ttacagatgc	1080
acatatcgag	gtggacatca	cttacgctga	gtacttcgaa	atgtccgttc	ggttggcaga	1140
agctatgaaa	cgatatgggc	tgaatacaaa	tcacagaatc	gtcgtatgca	gtgaaaactc	1200
tcttcaattc	tttatgccgg	tgttgggcgc	gttatttatc	ggagttgcag	ttgcgcccgc	1260
gaacgacatt	tataatgaac	gtgaattgct	caacagtatg	ggcatttcgc	agcctaccgt	1320
ggtgttcgtt	tccaaaaagg	ggttgcaaaa	aattttgaac	gtgcaaaaaa	agctcccaat	1380
catccaaaaa	attattatca	tggattctaa	aacggattac	cagggatttc	agtcgatgta	1440
cacgttcgtc	acatctcatc	tacctcccgg	ttttaatgaa	tacgattttg	tgccagagtc	1500
cttcgatagg	gacaagacaa	ttgcactgat	catgaactcc	tctggatcta	ctggtctgcc	1560
taaaggtgtc	gctctgcctc	atagaactgc	ctgcgtgaga	ttctcgcatg	ccagagatcc	1620
tatttttggc	aatcaaatca	ttccggatac	tgcgatttta	agtgttgttc	cattccatca	1680
cggttttgga	atgtttacta	cactcggata	tttgatatgt	ggatttcgag	tcgtcttaat	1740
gtatagattt	gaagaagagc	tgtttctgag	gàgccttcag	gattacaaga	ttcaaagtgc	1800
gctgctggtg	ccaaccctat	tctccttctt	cgccaaaagc	actctgattg	acaaatacga	1860
tttatctaat	ttacacgaaa	ttgcttctgg	tggcgctccc	ctctctaagg	aagtcgggga	1920

agcggttgcc	aagaggttco	atctgccagg	025CIP SEQ tatcaggcaa	List.txt ggatatgggc	tcactgagac	1980
tacatcagct	attctgatta	cacccgaggg	ggatgataaa	ccgggcgcgg	tcggtaaagt	2040
tgttccattt	tttgaagcga	aggttgtgga	tctggatacc	gggaaaacgc	tgggcgttaa	2100
tcaaagaggc	gaactgtgtg	tgagaggtco	tatgattatg	tccggttatg	taaacaatcc	2160
ggaagcgacc	aacgccttga	ttgacaagga	tggatggcta	cattctggag	acatagctta	2220
ctgggacgaa	gacgaacact	tcttcatcgt	tgaccgcctg	aagtctctga	ttaagtacaa	2280
aggctatcag	gtggctcccg	ctgaattgga	atccatcttg	ctccaacacc	ccaacatctt	2340
cgacgcaggt	gtcgcaggtc	ttcccgacga	tgacgccggt	gaacttcccg	ccgccgttgt	2400
tgttttggag	cacggaaaga	cgatgacgga	aaaagagatc	gtggattacg	tcgccagtca	2460
agtaacaacc	gcgaaaaagt	tgcgcggagg	agttgtgttt	gtggacgaag	taccgaaagg	2520
tcttaccgga	aaactcgacg	caagaaaaat	cagagagatc	ctcataaagg	ccaagaaggg	2580
cggaaagatc	gccgtgtaat	tctagagtcg	gggcggccgg	ccgcttcgag	cagacatgat	2640
aagatacatt	gatgagtttg	gacaaaccac	aactagaatg	cagtgaaaaa	aatgctttat	2700
ttgtgaaatt	tgtgatgcta	ttgctttatt	tgtaaccatt	ataagctgca	ataaacaagt	2760
taacaacaac	aattgcattc	attttatgtt	tcaggttcag	ggggaggtgt	gggaggtttt	2820
ttaaagcaag	taaaacctct	acaaatgtgg	taaaatcgat	aaggatcaat	tcggcttcga	2880
ctagtactga	cggacacacc	gaagccccgg	cggcaaccct	cagcggatgc	cccggggctt	2940
cacgttttcc	caggtcagaa	gcggttttcg	ggagtagtgc	cccaactggg	gtaacctttg	3000
agttctctca	gttgggggcg	tagggtcgcc	gacatgacac	aaggggttgt	gaccggggtg	3060
gacacgtacg	cgggtgctta	cgaccgtcag	tcgcgcgagc	gcgactagta	caagccgaat	3120
tgatccgtcg	accgatgccc	ttgagagcct	tcaacccagt	cagctccttc	cggtgggcgc	3180
ggggcatgac	tatcgtcgcc	gcacttatga	ctgtcttctt	tatcatgcaa	ctcgtaggac	3240
aggtgccggc	agcgctcttc	cgcttcctcg	ctcactgact	cgctgcgctc	ggtcgttcgg	3300
ctgcggcgag	cggtatcagc	tcactcaaag	gcggtaatac	ggttatccac	agaatcaggg	3360
gataacgcag	gaaagaacat	gtgagcaaaa	ggccagcaaa	aggccaggaa	ccgtaaaaag	3420
gccgcgttgc	tggcgttttt	ccataggctc	cgccccctg	acgagcatca	caaaaatcga	3480
cgctcaagtc	agaggtggcg	aaacccgaca	ggactataaa	gataccaggc	gtttccccct	3540
ggaagctccc	tcgtgcgctc	tcctgttccg	accctgccgc	ttaccggata	cctgtccgcc	3600
tttctccctt	cgggaagcgt	ggcgctttct	caatgctcac	gctgtaggta	tctcagttcg	3660
gtgtaggtcg	ttcgctccaa	gctgggctgt	gtgcacgaac	ccccgttca	gcccgaccgc	3720
tgcgccttat	ccggtaacta	tcgtcttgag	tccaacccgg	taagacacga	cttatcgcca	3780
ctggcagcag	ccactggtaa	caggattagc	agagcgaggt Page	atgtaggcgg 9	tgctacagag	3840

ttcttgaagt	ggtggcctaa	ctacggctac	actagaagga	cagtatttgg	tatctgcgct	3900
ctgctgaagc	cagttacctt	cggaaaaaga	gttggtagct	cttgatccgg	caaacaaacc	3960
accgctggta	gcggtggttt	ttttgtttgc	aagcagcaga	ttacgcgcag	aaaaaaagga	4020
tctcaagaag	atcctttgat	cttttctacg	gggtctgacg	ctcagtggaa	cgaaaactca	4080
cgttaaggga	ttttggtcat	gagattatca	aaaaggatct	tcacctagat	ccttttaaat	4140
taaaaatgaa	gttttaaatc	aatctaaagt	atatatgagt	aaacttggtc	tgacagttac	4200
caatgcttaa	tcagtgaggc	acctatctca	gcgatctgtc	tatttcgttc	atccatagtt	4260
gcctgactcc	ccgtcgtgta	gataactacg	atacgggagg	gcttaccatc	tggccccagt	4320
gctgcaatga	taccgcgaga	cccacgctca	ccggctccag	atttatcagc	aataaaccag	4380
ccagccggaa	gggccgagcg	cagaagtggt	cctgcaactt	tatccgcctc	catccagtct	4440
attaattgtt	gccgggaagc	tagagtaagt	agttcgccag	ttaatagttt	gcgcaacgtt	4500
gttgccattg	ctacaggcat	cgtggtgtca	cgctcgtcgt	ttggtatggc	ttcattcagc	4560
tccggttccc	aacgatcaag	gcgagttaca	tgatccccca	tgttgtgcaa	aaaagcggtt	4620
agctccttcg	gtcctccgat	cgttgtcaga	agtaagttgg	ccgcagtgtt	atcactcatg	4680
gttatggcag	cactgcataa	ttctcttact	gtcatgccat	ccgtaagatg	cttttctgtg	4740
actggtgagt	actcaaccaa	gtcattctga	gaatagtgta	tgcggcgacc	gagttgctct	4800
tgcccggcgt	caatacggga	taataccgcg	ccacatagca	gaactttaaa	agtgctcatc	4860
attggaaaac	gttcttcggg	gcgaaaactc	tcaaggatct	taccgctgtt	gagatccagt	4920
tcgatgtaac	ccactcgtgc	acccaactga	tcttcagcat	cttttacttt	caccagcgtt	4980
tctgggtgag	caaaaacagg	aaggcaaaat	gccgcaaaaa	agggaataag	ggcgacacgg	5040
aaatgttgaa	tactcatact	cttccttttt	caatattatt	gaagcattta	tcagggttat	5100
tgtctcatga	gcggatacat	atttgaatgt	atttagaaaa	ataaacaaat	aggggttccg	5160
cgcacatttc	cccgaaaagt	gccacctgac	gcgccctgta	gcggcgcatt	aagcgcggcg	5220
ggtgtggtgg	ttacgcgcag	cgtgaccgct	acacttgcca	gcgccctagc	gcccgctcct	5280
ttcgctttct	tcccttcctt	tctcgccacg	ttcgccggct	ttccccgtca	agctctaaat	5340
cgggggctcc	ctttagggtt	ccgatttagt	gctttacggc	acctcgaccc	caaaaaactt	5400
gattagggtg	atggttcacg	tagtgggcca	tcgccctgat	agacggtttt	tcgccctttg	5460
acgttggagt	ccacgttctt	taatagtgga	ctcttgttcc	aaactggaac	aacactcaac	5520
cctatctcgg	tctattcttt	tgatttataa	gggattttgc	cgatttcggc	ctattggtta	5580
aaaaatgagc	tgatttaaca	aaaatttaac	gcgaatttta	acaaaatatt	aacgtttaca	5640
atttcccatt	cgccattcag	gctgcgcaac	tgttgggaag	ggcgatcggt	gcgggcctct	5700

tcgctattac	gccagcccaa	gctaccatga	025CIP SEQ taagtaagta	List.txt atattaaggt	acgggaggta	5760
			tttcattaca			5820
			atcaaaacaa			5880
			gtgccagaac		unculuctuy	5924
		3 3 3 3 4 3	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	uccc		3324
<210> 4 <211> 510 <212> DNA <213> Pla		ur-attB				
<400> 4						
			agacatgata			60
			atgctttatt			120
tgctttattt	gtaaccatta	taagctgcaa	taaacaagtt	aacaacaaca	attgcattca	180
ttttatgttt	caggttcagg	gggaggtgtg	ggaggttttt	taaagcaagt	aaaacctcta	240
caaatgtggt	aaaatcgata	aggatcaatt	cggcttcagg	taccgtcgac	gatgtaggtc	300
acggtctcga	agccgcggtg	cgggtgccag	ggcgtgccct	tgggctcccc	gggcgcgtac	360
tccacctcac	ccatctggtc	catcatgatg	aacgggtcga	ggtggcggta	gttgatcccg	420
gcgaacgcgc	ggcgcaccgg	gaagccctcg	ccctcgaaac	cgctgggcgc	ggtggtcacg	480
gtgagcacgg	gacgtgcgac	ggcgtcggcg	ggtgcggata	cgcggggcag	cgtcagcggg	540
ttctcgacgg	tcacggcggg	catgtcgaca	gccgaattga	tccgtcgacc	gatgcccttg	600
agagccttca	acccagtcag	ctccttccgg	tgggcgcggg	gcatgactat	cgtcgccgca	660
cttatgactg	tcttctttat	catgcaactc	gtaggacagg	tgccggcagc	gctcttccgc	720
ttcctcgctc	actgactcgc	tgcgctcggt	cgttcggctg	cggcgagcgg	tatcagctca	780
ctcaaaggcg	gtaatacggt	tatccacaga	atcaggggat	aacgcaggaa	agaacatgtg	840
agcaaaaggc	cagcaaaagg	ccaggaaccg	taaaaaggcc	gcgttgctgg	cgtttttcca	900
taggctccgc	cccctgacg	agcatcacaa	aaatcgacgc	tcaagtcaga	ggtggcgaaa	960
cccgacagga	ctataaagat	accaggcgtt	tcccctgga	agctccctcg	tgcgctctcc	1020
tgttccgacc	ctgccgctta	ccggatacct	gtccgccttt	ctcccttcgg	gaagcgtggc	1080
gctttctcaa	tgctcacgct	gtaggtatct	cagttcggtg	taggtcgttc	gctccaagct	1140
			cgaccgctgc			1200
			atcgccactg			1260
			tacagagttc			1320
			ctgcgctctg			1380
			acaaaccacc			1440

#### 025CIP SEQ List.txt tgtttgcaag cagcagatta cgcgcagaaa aaaaggatct caagaagatc ctttgatctt 1500 ttctacgggg tctgacgctc agtggaacga aaactcacgt taagggattt tggtcatgag 1560 attatcaaaa aggatcttca cctagatcct tttaaattaa aaatgaagtt ttaaatcaat 1620 ctaaagtata tatgagtaaa cttggtctga cagttaccaa tgcttaatca gtgaggcacc 1680 tatctcagcg atctgtctat ttcgttcatc catagttgcc tgactccccg tcgtgtagat 1740 aactacgata cgggagggct taccatctgg ccccagtgct gcaatgatac cgcgagaccc 1800 acgctcaccg gctccagatt tatcagcaat aaaccagcca gccggaaggg ccgagcgcag 1860 aagtggtcct gcaactttat ccgcctccat ccagtctatt aattgttgcc gggaagctag 1920 agtaagtagt tcgccagtta atagtttgcg caacgttgtt gccattgcta caggcatcgt 1980 ggtgtcacgc tcgtcgtttg gtatggcttc attcagctcc ggttcccaac gatcaaggcg 2040 agttacatga tcccccatgt tgtgcaaaaa agcggttagc tccttcggtc ctccgatcgt 2100 tgtcagaagt aagttggccg cagtgttatc actcatggtt atggcagcac tgcataattc 2160 tcttactgtc atgccatccg taagatgctt ttctgtgact ggtgagtact caaccaagtc 2220 attctgagaa tagtgtatgc ggcgaccgag ttgctcttgc ccggcgtcaa tacgggataa 2280 taccgcgcca catagcagaa ctttaaaagt gctcatcatt ggaaaacgtt cttcggggcg 2340 aaaactctca aggatcttac cgctgttgag atccagttcg atgtaaccca ctcgtgcacc 2400 caactgatct tcagcatctt ttactttcac cagcgtttct gggtgagcaa aaacaggaag 2460 gcaaaatgcc gcaaaaagg gaataagggc gacacggaaa tgttgaatac tcatactctt 2520 cctttttcaa tattattgaa gcatttatca gggttattgt ctcatgagcg gatacatatt 2580 tgaatgtatt tagaaaaata aacaaatagg ggttccgcgc acatttcccc gaaaagtgcc 2640 acctgacgcg ccctgtagcg gcgcattaag cgcggcgggt gtggtggtta cgcgcagcgt 2700 gaccgctaca cttgccagcg ccctagcgcc cgctcctttc gctttcttcc cttcctttct 2760 cgccacgttc gccggctttc cccgtcaagc tctaaatcgg gggctccctt tagggttccg 2820 atttagtgct ttacggcacc tcgaccccaa aaaacttgat tagggtgatg gttcacgtag 2880 tgggccatcg ccctgataga cggtttttcg ccctttgacg ttggagtcca cgttctttaa 2940 tagtggactc ttgttccaaa ctggaacaac actcaaccct atctcggtct attctttga 3000 tttataaggg attttgccga tttcggccta ttggttaaaa aatgagctga tttaacaaaa 3060 atttaacgcg aattttaaca aaatattaac gtttacaatt tcccattcgc cattcaggct 3120 gcgcaactgt tgggaagggc gatcggtgcg ggcctcttcg ctattacgcc agcccaagct 3180 accatgataa gtaagtaata ttaaggtacg ggaggtactt ggagcggccg caataaaata 3240 tctttatttt cattacatct gtgtgttggt tttttgtgtg aatcgatagt actaacatac 3300 gctctccatc aaaacaaaac gaaacaaaac aaactagcaa aataggctgt ccccagtgca 3360

Page 12

agtgcaggtg ccagaacatt tctctatcga taggtaccga gctcttacgc gtgctagccc	3420
tcgagcagga tctatacatt gaatcaatat tggcaattag ccatattagt cattggttat	3480
atagcataaa tcaatattgg ctattggcca ttgcatacgt tgtatctata tcataatatg	3540
tacatttata ttggctcatg tccaatatga ccgccatgtt gacattgatt attgactagt	3600
tattaatagt aatcaattac ggggtcatta gttcatagcc catatatgga gttccgcgtt	3660
acataactta cggtaaatgg cccgcctggc tgaccgccca acgacccccg cccattgacg	3720
tcaataatga cgtatgttcc catagtaacg ccaataggga ctttccattg acgtcaatgg	3780
gtggagtatt tacggtaaac tgcccacttg gcagtacatc aagtgtatca tatgccaagt	3840
ccgccccta ttgacgtcaa tgacggtaaa tggcccgcct ggcattatgc ccagtacatg	3900
accttacggg actttcctac ttggcagtac atctacgtat tagtcatcgc tattaccatg	3960
gtgatgcggt tttggcagta catcaatggg cgtggatagc ggtttgactc acggggattt	4020
ccaagtctcc accccattga cgtcaatggg agtttgtttt ggcaccaaaa tcaacgggac	4080
tttccaaaat gtcgtaacaa ctccgcccca ttgacgcaaa tgggcggtag gcgtgtacgg	4140
tgggaggtct atataagcag agctcgttta gtgaaccgtc agatcgcctg gagacgccat	4200
ccacgctgtt ttgacctcca tagaagacac cgggaccgat ccagcctccc ctcgaagctc	4260
gactctaggg gctcgagatc tgcgatctaa gtaagcttgc atgcctgcag gtcggccgcc	4320
acgaccggtg ccgccaccat cccctgaccc acgcccctga cccctcacaa ggagacgacc	4380
ttccatgacc gagtacaagc ccacggtgcg cctcgccacc cgcgacgacg tcccccgggc	4440
cgtacgcacc ctcgccgccg cgttcgccga ctaccccgcc acgcgccaca ccgtcgaccc	4500
ggaccgccac atcgagcggg tcaccgagct gcaagaactc ttcctcacgc gcgtcgggct	4560
cgacatcggc aaggtgtggg tcgcggacga cggcgccgcg gtggcggtct ggaccacgcc	4620
ggagagcgtc gaagcggggg cggtgttcgc cgagatcggc ccgcgcatgg ccgagttgag	4680
cggttcccgg ctggccgcgc agcaacagat ggaaggcctc ctggcgccgc accggcccaa	4740
ggagcccgcg tggttcctgg ccaccgtcgg cgtctcgccc gaccaccagg gcaagggtct	4800
gggcagcgcc gtcgtgctcc ccggagtgga ggcggccgag cgcgccgggg tgcccgcctt	4860
cctggagacc tccgcgcccc gcaacctccc cttctacgag cggctcggct	4920
cgccgacgtc gaggtgcccg aaggaccgcg cacctggtgc atgacccgca agcccggtgc	4980
ctgacgcccg ccccacgacc cgcagcgccc gaccgaaagg agcgcacgac cccatggctc	5040
cgaccgaagc cgacccgggc ggccccgccg accccgcacc cgcccccgag gcccaccgac	5100
t	5101

<211> 5043 <212> DNA <213> Plasmid pCMV-pur-attP

<400> ctagagtcgg ggcggccggc cgcttcgagc agacatgata agatacattg atgagtttgg 60 acaaaccaca actagaatgc agtgaaaaaa atgctttatt tgtgaaattt gtgatgctat 120 tgctttattt gtaaccatta taagctgcaa taaacaagtt aacaacaaca attgcattca 180 ttttatgttt caggttcagg gggaggtgtg ggaggttttt taaagcaagt aaaacctcta 240 caaatgtggt aaaatcgata aggatcaatt cggcttcgac tagtactgac ggacacaccg 300 aagccccggc ggcaaccctc agcggatgcc ccggggcttc acgttttccc aggtcagaag 360 cggttttcgg gagtagtgcc ccaactgggg taacctttga gttctctcag ttgggggcgt 420 agggtcgccg acatgacaca aggggttgtg accggggtgg acacgtacgc gggtgcttac 480 gaccgtcagt cgcgcgagcg cgactagtac aagccgaatt gatccgtcga ccgatgccct 540 tgagagcctt caacccagtc agctccttcc ggtgggcgcg gggcatgact atcgtcgccg 600 cacttatgac tgtcttcttt atcatgcaac tcgtaggaca ggtgccggca gcgctcttcc 660 gcttcctcgc tcactgactc gctgcgctcg gtcgttcggc tgcggcgagc ggtatcagct 720 cactcaaagg cggtaatacg gttatccaca gaatcagggg ataacgcagg aaagaacatg 780 tgagcaaaag gccagcaaaa ggccaggaac cgtaaaaagg ccgcgttgct ggcgtttttc 840 cataggetee geceectga egageateae aaaaategae geteaagtea gaggtggega 900 aacccgacag gactataaag ataccaggcg tttccccctg gaagctccct cgtgcgctct 960 cctgttccga ccctgccgct taccggatac ctgtccgcct ttctcccttc gggaagcgtg 1020 gcgctttctc aatgctcacg ctgtaggtat ctcagttcgg tgtaggtcgt tcgctccaag 1080 ctgggctgtg tgcacgaacc ccccgttcag cccgaccgct gcgccttatc cggtaactat 1140 cgtcttgagt ccaacccggt aagacacgac ttatcgccac tggcagcagc cactggtaac 1200 aggattagca gagcgaggta tgtaggcggt gctacagagt tcttgaagtg gtggcctaac 1260 tacggctaca ctagaaggac agtatttggt atctgcgctc tgctgaagcc agttaccttc 1320 ggaaaaagag ttggtagctc ttgatccggc aaacaaacca ccgctggtag cggtggtttt 1380 tttgtttgca agcagcagat tacgcgcaga aaaaaaggat ctcaagaaga tcctttgatc 1440 ttttctacgg ggtctgacgc tcagtggaac gaaaactcac gttaagggat tttggtcatg 1500 agattatcaa aaaggatctt cacctagatc cttttaaatt aaaaatgaag ttttaaatca 1560 atctaaagta tatatgagta aacttggtct gacagttacc aatgcttaat cagtgaggca 1620 cctatctcag cgatctgtct atttcgttca tccatagttg cctgactccc cgtcgtgtag 1680 ataactacga tacgggaggg cttaccatct ggccccagtg ctgcaatgat accgcgagac 1740

#### 025CIP SEQ List.txt ccacgctcac cggctccaga tttatcagca ataaaccagc cagccggaag ggccgagcgc 1800 agaagtggtc ctgcaacttt atccgcctcc atccagtcta ttaattgttg ccgggaagct 1860 agagtaagta gttcgccagt taatagtttg cgcaacgttg ttgccattgc tacaggcatc 1920 gtggtgtcac gctcgtcgtt tggtatggct tcattcagct ccggttccca acgatcaagg 1980 cgagttacat gatcccccat gttgtgcaaa aaagcggtta gctccttcgg tcctccgatc 2040 gttgtcagaa gtaagttggc cgcagtgtta tcactcatgg ttatggcagc actgcataat 2100 tctcttactg tcatgccatc cgtaagatgc ttttctgtga ctggtgagta ctcaaccaag 2160 tcattctgag aatagtgtat gcggcgaccg agttgctctt gcccggcgtc aatacgggat 2220 aataccgcgc cacatagcag aactttaaaa gtgctcatca ttggaaaacg ttcttcgggg 2280 cgaaaactct caaggatctt accgctgttg agatccagtt cgatgtaacc cactcgtgca 2340 cccaactgat cttcagcatc ttttactttc accagcgttt ctgggtgagc aaaaacagga 2400 aggcaaaatg ccgcaaaaaa gggaataagg gcgacacgga aatgttgaat actcatactc 2460 ttcctttttc aatattattg aagcatttat cagggttatt gtctcatgag cggatacata 2520 tttgaatgta tttagaaaaa taaacaaata ggggttccgc gcacatttcc ccgaaaagtg 2580 ccacctgacg cgccctgtag cggcgcatta agcgcggcgg gtgtggtggt tacgcgcagc 2640 gtgaccgcta cacttgccag cgccctagcg cccgctcctt tcgctttctt cccttcttt 2700 ctcgccacgt tcgccggctt tccccgtcaa gctctaaatc gggggctccc tttagggttc 2760 cgatttagtg ctttacggca cctcgacccc aaaaaacttg attagggtga tggttcacgt 2820 agtgggccat cgccctgata gacggttttt cgccctttga cgttggagtc cacgttcttt 2880 aatagtggac tcttgttcca aactggaaca acactcaacc ctatctcggt ctattctttt 2940 gatttataag ggattttgcc gatttcggcc tattggttaa aaaatgagct gatttaacaa 3000 aaatttaacg cgaattttaa caaaatatta acgtttacaa tttcccattc gccattcagg 3060 ctgcgcaact gttgggaagg gcgatcggtg cgggcctctt cgctattacg ccagcccaag 3120 ctaccatgat aagtaagtaa tattaaggta cgggaggtac ttggagcggc cgcaataaaa 3180 tatctttatt ttcattacat ctgtgtgttg gttttttgtg tgaatcgata gtactaacat 3240 acgctctcca tcaaaacaaa acgaaacaaa acaaactagc aaaataggct gtccccagtg 3300 caagtgcagg tgccagaaca tttctctatc gataggtacc gagctcttac gcgtgctagc 3360 cctcgagcag gatctataca ttgaatcaat attggcaatt agccatatta gtcattggtt 3420 atatagcata aatcaatatt ggctattggc cattgcatac gttgtatcta tatcataata 3480 tgtacattta tattggctca tgtccaatat gaccgccatg ttgacattga ttattgacta 3540 gttattaata gtaatcaatt acggggtcat tagttcatag cccatatatg gagttccgcg 3600 ttacataact tacggtaaat ggcccgcctg gctgaccgcc caacgacccc cgcccattga 3660

Page 15

			•			
cgtcaataa	gacgtatgtt	cccatagtaa	cgccaatagg	gactttccat	tgacgtcaat	3720
gggtggagta	tttacggtaa	actgcccact	tggcagtaca	tcaagtgtat	catatgccaa	3780
gtccgcccc	tattgacgtc	aatgacggta	aatggcccgc	ctggcattat	gcccagtaca	3840
tgaccttaco	ggactttcct	acttggcagt	acatctacgt	attagtcatc	gctattacca	3900
tggtgatgcg	gttttggcag	tacatcaatg	ggcgtggata	gcggtttgac	tcacggggat	3960
ttccaagtct	ccaccccatt	gacgtcaatg	ggagtttgtt	ttggcaccaa	aatcaacggg	4020
actttccaaa	atgtcgtaac	aactccgccc	cattgacgca	aatgggcggt	aggcgtgtac	4080
ggtgggaggt	ctatataagc	agagctcgtt	tagtgaaccg	tcagatcgcc	tggagacgcc	4140
atccacgctg	ttttgacctc	catagaagac	accgggaccg	atccagcctc	ccctcgaagc	4200
tcgactctag	gggctcgaga	tctgcgatct	aagtaagctt	gcatgcctgc	aggtcggccg	4260
ccacgaccgg	tgccgccacc	atcccctgac	ccacgcccct	gacccctcac	aaggagacga	4320
ccttccatga	ccgagtacaa	gcccacggtg	cgcctcgcca	cccgcgacga	cgtcccccgg	4380
gccgtacgca	ccctcgccgc	cgcgttcgcc	gactaccccg	ccacgcgcca	caccgtcgac	4440
ccggaccgcc	acatcgagcg	ggtcaccgag	ctgcaagaac	tcttcctcac	gcgcgtcggg	4500
ctcgacatcg	gcaaggtgtg	ggtcgcggac	gacggcgccg	cggtggcggt	ctggaccacg	4560
ccggagagcg	tcgaagcggg	ggcggtgttc	gccgagatcg	gcccgcgcat	ggccgagttg	4620
agcggttccc	ggctggccgc	gcagcaacag	atggaaggcc	tcctggcgcc	gcaccggccc	4680
aaggagcccg	cgtggttcct	ggccaccgtc	ggcgtctcgc	ccgaccacca	gggcaagggt	4740
ctgggcagcg	ccgtcgtgct	ccccggagtg	gaggcggccg	agcgcgccgg	ggtgcccgcc	4800
ttcctggaga	cctccgcgcc	ccgcaacctc	cccttctacg	agcggctcgg	cttcaccgtc	4860
accgccgacg	tcgaggtgcc	cgaaggaccg	cgcacctggt	gcatgacccg	caagcccggt	4920
gcctgacgcc	cgccccacga	cccgcagcgc	ccgaccgaaa	ggagcgcacg	accccatggc	4980
tccgaccgaa	gccgacccgg	gcggccccgc	cgaccccgca	cccgccccg	aggcccaccg	5040
act						5043
<210> 6 <211> 504: <212> DNA <213> Plas	L smid pCMV-EC	GFP-attB				
<400> 6						
		cgcttcgagc				60
		agtgaaaaaa				120
		taagctgcaa				180
cccatgttt	caggttcagg	gggaggtgtg	ggaggttttt Page 1	taaagcaagt .6	aaaacctcta	240

caaatgtggt aaaatcgata aggatcaatt cggcttcagg taccgtcgac gatgtaggtc	300
acggtctcga agccgcggtg cgggtgccag ggcgtgccct tgggctcccc gggcgcgtac	360
tccacctcac ccatctggtc catcatgatg aacgggtcga ggtggcggta gttgatcccg	420
gcgaacgcgc ggcgcaccgg gaagccctcg ccctcgaaac cgctgggcgc ggtggtcacg	
gtgagcacgg gacgtgcgac ggcgtcggcg ggtgcggata cgcggggcag cgtcagcggg	480
ttctcgacgg tcacggcggg catgtcgaca gccgaattga tccgtcgacc gatgcccttg	540
agagccttca acccagtcag ctccttccgg tgggcgcggg gcatgactat cgtcgccgca	600
cttatgactg tcttctttat catgcaactc gtaggacagg tgccggcagc gctcttccgc	660
ttcctcgctc actgactcgc tgcgctcggt cgttcggctg cggcgagcgg tatcagctca	720
ctcaaaggcg gtaatacggt tatccacaga atcaggggat aacgcaggaa agaacatgtg	780
agcaaaaggc cagcaaaagg ccaggaaccg taaaaaggcc gcgttgctgg cgttttcca	840
taggctccgc ccccctgacg agcatcacaa aaatcgacgc tcaagtcaga ggtggcgaaa	900
cccgacagga ctataaagat accaggcgtt tccccctgga agctccctcg tgcgctctcc	960
tgttccgacc ctgccgctta ccggatacct gtccgccttt ctcccttcgg gaagcgtggc	1020
gctttctcaa tgctcacgct gtaggtatct cagttcggtg taggtcgttc gctccaagct	1080
gggctgtgtg cacgaacccc ccgttcagcc cgaccgctgc gccttatccg gtaactatcg	1140
tcttgagtcc aacccggtaa gacacgactt atcgccactg gcagcagcca ctggtaacag	1200
gattagcaga qcqaqqtatq tagqcqqtqc tacaqqqtta	1260
gattagcaga gcgaggtatg taggcggtgc tacagagttc ttgaagtggt ggcctaacta	1320
cggctacact agaaggacag tatttggtat ctgcgctctg ctgaagccag ttaccttcgg	1380
aaaaagagtt ggtagctctt gatccggcaa acaaaccacc gctggtagcg gtggttttt	1440
tgtttgcaag cagcagatta cgcgcagaaa aaaaggatct caagaagatc ctttgatctt	1500
ttctacgggg tctgacgctc agtggaacga aaactcacgt taagggattt tggtcatgag	1560
attatcaaaa aggatcttca cctagatcct tttaaattaa aaatgaagtt ttaaatcaat	1620
ctaaagtata tatgagtaaa cttggtctga cagttaccaa tgcttaatca gtgaggcacc	1680
tatctcagcg atctgtctat ttcgttcatc catagttgcc tgactccccg tcgtgtagat	1740
aactacgata cgggagggct taccatctgg ccccagtgct gcaatgatac cgcgagaccc	1800
acgctcaccg gctccagatt tatcagcaat aaaccagcca gccggaaggg ccgagcgcag	1860
aagtggtcct gcaactttat ccgcctccat ccagtctatt aattgttgcc gggaagctag	1920
agtaagtagt tegecagtta atagtttgeg caaegttgtt gecattgeta eaggeategt	1980
ggtgtcacgc tcgtcgtttg gtatggcttc attcagctcc ggttcccaac gatcaaggcg	2040
agttacatga tcccccatgt tgtgcaaaaa agcggttagg tacttagg	2100

025CIP SEQ List.txt	2160
totcagaagt aagttggccg cagtgttatc actcatggil alggeageae egulatus	2220
tettactgte atgecateeg taagatgett ttetgtgaet gglgagtaet educedagge	2280
attotgagaa tagtgtatgo ggogacogag ttgotottgo ocggogadaa cacgggadaa	2340
taccococca catagcagaa ctttaaaagt gctcatcatt ggaaaacgtt cttcggggg	2400
aaaactctca aggatcttac cgctgttgag atccagttcg atgtaaccca ctcgtgcacc	2460
caactgatct tcagcatctt ttactttcac cagcgtttct gggtgagcaa aaacaggaag	
gcaaaatgcc gcaaaaaagg gaataagggc gacacggaaa tgttgaatac tcatactctt	2520
cctttttcaa tattattgaa gcatttatca gggttattgt ctcatgagcg gatacatatt	2580
tgaatgtatt tagaaaaata aacaaatagg ggttccgcgc acatttcccc gaaaagtgcc	2640
acctuacoco ccctotageo gegeattaag egeggegggt gtggtta egegeagege	2700
gaccgctaca cttgccagcg ccctagcgcc cgctcctttc gctttcttcc cttcctttct	2760
cgccacgttc gccggctttc cccgtcaagc tctaaatcgg gggctccctt tagggttccg	2820
atttagtgct ttacggcacc tcgaccccaa aaaacttgat tagggtgatg gttcacgtag	2880
tgggccatcg ccctgataga cggtttttcg ccctttgacg ttggagtcca cgttctttaa	2940
tagtggactc ttgttccaaa ctggaacaac actcaaccct atctcggtct attcttttga	3000
tttataaggg attttgccga tttcggccta ttggttaaaa aatgagctga tttaacaaaa	3060
atttaacgcg aattttaaca aaatattaac gtttacaatt tcccattcgc cattcaggct	3120
gcgcaactgt tgggaagggc gatcggtgcg ggcctcttcg ctattacgcc agcccaagct	3180
accatgataa gtaagtaata ttaaggtacg ggaggtactt ggagcggccg caataaaata	3240
tctttatttt cattacatct gtgtgttggt tttttgtgtg aatcgatagt actaacatac	3300
gctctccatc aaaacaaaac gaaacaaaac aaactagcaa aataggctgt ccccagtgca	3360
agtgcaggtg ccagaacatt tctctatcga taggtaccga gctcttacgc gtgctagccc	3420
tcgagcagga tctatacatt gaatcaatat tggcaattag ccatattagt cattggttat	3480
atagcataaa tcaatattgg ctattggcca ttgcatacgt tgtatctata tcataatatg	3540
tacatttata ttggctcatg tccaatatga ccgccatgtt gacattgatt attgactagt	3600
tattaatagt aatcaattac ggggtcatta gttcatagcc catatatgga gttccgcgtt	3660
acataactta cggtaaatgg cccgcctggc tgaccgccca acgacccccg cccattgacg	3720
tcaataatga cgtatgttcc catagtaacg ccaataggga ctttccattg acgtcaatgg	3780
tcaataatga cgtatgttcc catagtaacg ccuutuggg	3840
gtggagtatt tacggtaaac tgcccacttg gcagtacatc aagtgtatca tatgccaagt	3900
ccgccccta ttgacgtcaa tgacggtaaa tggcccgcct ggcattatgc ccagtacatg	3960
accttacggg actttcctac ttggcagtac atctacgtat tagtcatcgc tattaccatg	4020
gtgatgcggt tttggcagta catcaatggg cgtggatagc ggtttgactc acggggattt Page 18	

OZSCIP SEQ LISC. CAL	
ccaagtctcc accccattga cgtcaatggg agtttgtttt ggcaccaaaa tcudegggad	4080
tttccaaaat gtcgtaacaa ctccgcccca ttgacgcaaa tgggcggtag gcgtgtacgg	4140
tgggaggtct atataagcag agctcgttta gtgaaccgtc agatcgcctg gagacgccat	4200
ccacgctgtt ttgacctcca tagaagacac cgggaccgat ccagcctccc ctcgaagctc	4260
gactctaggg gctcgagatc cccgggtacc ggtcgccacc atggtgagca agggcgagga	4320
gctgttcacc ggggtggtgc ccatcctggt cgagctggac ggcgacgtaa acggccacaa	4380
gttcagcgtg tccggcgagg gcgagggcga tgccacctac ggcaagctga ccctgaagtt	4440
catctgcacc accggcaagc tgcccgtgcc ctggcccacc ctcgtgacca ccctgaccta	4500
catctgcacc accygcaage tycecytydd brys cggcgtgcag tgcttcagcc gctaccccga ccacatgaag cagcacgact tcttcaagtc	4560
cggcgtgcag tgcttcagct gctaccccga caccatcttc ttcaaggacg acggcaacta	4620
caagacccgc gccgaggtga agttcgaggg cgacaccctg gtgaaccgca tcgagctgaa	4680
gggcatcgac ttcaaggagg acggcaacat cctggggcac aagctggagt acaactacaa	4740
gggcatcgac ttcaaggagg acggcaacat cctggggcat augusts s	4800
cagccacaac gtctatatca tggccgacaa gcagaagaac ggcatcaagg tgaacttcaa	4860
gatccgccac aacatcgagg acggcagcgt gcagctcgcc gaccactacc agcagaacac	4920
ccccatcggc gacggccccg tgctgctgcc cgacaaccac tacctgagca cccagtccgc	4980
cctgagcaaa gaccccaacg agaagcgcga tcacatggtc ctgctggagt tcgtgaccgc	5040
cgccgggatc actctcggca tggacgagct gtacaagtaa agcggccgct cgagcatgca	5041
t	
<210> 7 <211> 18116 <212> DNA <213> Plasmid p12.0lys-LSPIPNMM-CMV-pur-attB	60
<400> 7 gggctgcagg aattcgattg ccgccttctt tgatattcac tctgttgtat ttcatctctt	60
cttgccgatg aaaggatata acagtctgta taacagtctg tgaggaaata cttggtatti	120
cttctgatca gtgttttat aagtaatgtt gaatattgga taaggctgtg tgtcctttgt	180
cttgggagac aaagcccaca gcaggtggtg gttggggtgg tggcagctca gtgacaggag	240
aggtttttt gcctgttttt ttttttttt tttttttaa gtaaggtgtt ctttttctt	300
agtaaattt ctactggact gtatgttttg acaggtcaga aacatttctt caaaagaaga	360
accttttgga aactgtacag cccttttctt tcattccctt tttgctttct gtgccaatgc	420
ctttggttct gattgcatta tggaaaacgt tgatcggaac ttgaggtttt tatttatagt	480
gtggcttgaa agcttggata gctgttgtta cacgagatac cttattaagt ttaggccagc	540
ttgatgcttt atttttccc tttgaagtag tgagcgttct ctggtttttt tcctttgaaa Page 19	600

ctggtgaggc ttagattttt ctaatgggat tttttacctg atgatctagt tgcataccca	660
aatgcttgta aatgttttcc tagttaacat gttgataact tcggatttac atgttgtata	720
tacttgtcat ctgtgtttct agtaaaaata tatggcattt atagaaatac gtaattcctg	780
atttcctttt tttttatctc tatgctctgt gtgtacaggt caaacagact tcactcctat	840
ttttatttat agaattttat atgcagtctg tcgttggttc ttgtgttgta aggatacagc	900
ttttatttat agaattttat atgeagterg tegetagers as 3	960
cttaaatttc ctagagcgat gctcagtaag gcgggttgtc acatgggttc aaatgtaaaa	1020
cgggcacgtt tggctgctgc cttcccgaga tccaggacac taaactgctt ctgcactgag	1080
gtataaatcg cttcagatcc cagggaagtg cagatccacg tgcatattct taaagaagaa	1140
tgaatacttt ctaaaatatt ttggcatagg aagcaagcty catggatteg ttaggs	1200
aaattatttt ggtaacggag tgcataggtt ttaaacacag ttgcagcatg ctaacgagtc	1260
acagcgttta tgcagaagtg atgcctggat gcctgttgca gctgtttacg gcactgcctt	1320
gcagtgagca ttgcagatag gggtggggtg ctttgtgtcg tgttcccaca cgctgccaca	1380
cagccacctc ccggaacaca tctcacctgc tgggtacttt tcaaaccatc ttagcagtag	1440
tagatgagtt actatgaaac agagaagttc ctcagttgga tattctcatg ggatgtcttt	1500
tttcccatgt tgggcaaagt atgataaagc atctctattt gtaaattatg cacttgttag	1560
ttcctgaatc ctttctatag caccacttat tgcagcaggt gtaggctctg gtgtggcctg	
tgtctgtgct tcaatctttt aaagcttctt tggaaataca ctgacttgat tgaagtctct	1620
tgaagatagt aaacagtact tacctttgat cccaatgaaa tcgagcattt cagttgtaaa	1680
agaattccgc ctattcatac catgtaatgt aattttacac ccccagtgct gacactttgg	1740
aatatattca agtaatagac tttggcctca ccctcttgtg tactgtattt tgtaatagaa	1800
aatattttaa actgtgcata tgattattac attatgaaag agacattctg ctgatcttca	1860
aatgtaagaa aatgaggagt gcgtgtgctt ttataaatac aagtgattgc aaattagtgc	1920
aggtgtcctt aaaaaaaaaa aaaaaaagta atataaaaag gaccaggtgt tttacaagtg	1980
aaatacatto ctatttggta aacagttaca tttttatgaa gattaccago gctgctgact	2040
ttctaaacat aaggctgtat tgtcttcctg taccattgca tttcctcatt cccaatttgc	2100
acaaggatgt ctgggtaaac tattcaagaa atggctttga aatacagcat gggagcttgt	2160
ctgagttgga atgcagagtt gcactgcaaa atgtcaggaa atggatgtct ctcagaatgc	2220
ccaactccaa aggattttat atgtgtatat agtaagcagt ttcctgattc cagcaggcca	2280
aagagtctgc tgaatgttgt gttgccggag acctgtattt ctcaacaagg taagatggta	2340
tcctagcaac tgcggatttt aatacatttt cagcagaagt acttagttaa tctctacctt	2400
tectageaac tgeggattit aatacatett eagens y tagggategt tteateattt ttagatgtta taettgaaat aetgeataac ttttagettt taggggategt tecateatt ttagatgtta taettgaaat aetgeataac ttttagettt	2460
tagggatcgt ttcatcattt ttagatgtta tuttgatati s	

#### 025CIP SEQ List.txt catgggttcc ttttttcag cctttaggag actgttaagc aatttgctgt ccaacttttg 2520 2580 tgttggtctt aaactgcaat agtagtttac cttgtattga agaaataaag accattttta tattaaaaaa tacttttgtc tgtcttcatt ttgacttgtc tgatatcctt gcagtgccca 2640 ttatgtcagt tctgtcagat attcagacat caaaacttaa cgtgagctca gtggagttac 2700 agctgcggtt ttgatgctgt tattatttct gaaactagaa atgatgttgt cttcatctgc 2760 tcatcaaaca cttcatgcag agtgtaaggc tagtgagaaa tgcatacatt tattgatact 2820 tttttaaagt caacttttta tcagattttt ttttcatttg gaaatatatt gttttctaga 2880 ctgcatagct tctgaatctg aaatgcagtc tgattggcat gaagaagcac agcactcttc 2940 3000 atcttactta aacttcattt tggaatgaag gaagttaagc aagggcacag gtccatgaaa tagagacagt gcgctcagga gaaagtgaac ctggatttct ttggctagtg ttctaaatct 3060 gtagtgagga aagtaacacc cgattccttg aaagggctcc agctttaatg cttccaaatt 3120 3180 gaaggtggca ggcaacttgg ccactggtta tttactgcat tatgtctcag tttcgcagct 3240 aacctggctt ctccactatt gagcatggac tatagcctgg cttcagaggc caggtgaagg ttgggatggg tggaaggagt gctgggctgt ggctgggggg actgtgggga ctccaagctg 3300 agcttggggt gggcagcaca gggaaaagtg tgggtaacta tttttaagta ctgtgttgca 3360 aacgtctcat ctgcaaatac gtagggtgtg tactctcgaa gattaacagt gtgggttcag 3420 taatatatgg atgaattcac agtggaagca ttcaagggta gatcatctaa cgacaccaga 3480 3540 tcatcaagct atgattggaa gcggtatcag aagagcgagg aaggtaagca gtcttcatat 3600 gttttccctc cacgtaaagc agtctgggaa agtagcaccc cttgagcaga gacaaggaaa taattcagga gcatgtgcta ggagaacttt cttgctgaat tctacttgca agagctttga 3660 3720 tgcctggctt ctggtgcctt ctgcagcacc tgcaaggccc agagcctgtg gtgagctgga 3780 gggaaagatt ctgctcaagt ccaagcttca gcaggtcatt gtctttgctt cttcccccag cactgtgcag cagagtggaa ctgatgtcga agcctcctgt ccactacctg ttgctgcagg 3840 cagactgctc tcagaaaaag agagctaact ctatgccata gtctgaaggt aaaatgggtt 3900 3960 ttaaaaaaga aaacacaaag gcaaaaccgg ctgccccatg agaagaaagc agtggtaaac 4020 atggtagaaa aggtgcagaa gcccccaggc agtgtgacag gcccctcctg ccacctagag gcgggaacaa gcttccctgc ctagggctct gcccgcgaag tgcgtgtttc tttggtgggt 4080 4140 tttgtttggc gtttggtttt gagatttaga cacaagggaa gcctgaaagg aggtgttggg cactattttg gtttgtaaag cctgtacttc aaatatatat tttgtgaggg agtgtagcga 4200 attggccaat ttaaaataaa gttgcaagag attgaaggct gagtagttga gagggtaaca 4260 cgtttaatga gatcttctga aactactgct tctaaacact tgtttgagtg gtgagacctt 4320

ggataggtga gtgctcttgt tacatgtctg atgcacttgc ttgtcctttt ccatccacat

4380

ccatgcattc cacatccacg catttgtcac ttatcccata tctgtcatat ctgacatacc	4440
tgtctcttcg tcacttggtc agaagaaaca gatgtgataa tccccagccg ccccaagttt	4500
tgtctcttcg tcacttggtc agaagaaaca garges	4560
gagaagatgg cagttgcttc tttccctttt tcctgctaag taaggatttt ctcctggctt	4620
tgacacctca cgaaatagtc ttcctgcctt acattctggg cattattca aatatctttg	4680
gagtgcgctg ctctcaagtt tgtgtcttcc tactcttaga gtgaatgctc ttagagtgaa	4740
agagaaggaa gagaagatgt tggccgcagt tctctgatga acacacctct gaataatggc	4800
caaaggtggg tgggtttctc tgaggaacgg gcagcgtttg cctctgaaag caaggagctc	4860
tgcggagttg cagttatttt gcaactgatg gtggaactgg tgcttaaagc agattcccta	4920
ggttccctgc tacttctttt ccttcttggc agtcagttta tttctgacag acaaacagcc	4980
acceccacto caggettaga aagtatgtgg etetgeetgg gtgtgttaca getetgeet	5040
gataaaagg gattaaaacg ggcaccattc atcccaaaca ggatcctcat tcalyyacca	
agctgtaagg aacttgggct ccaacctcaa aacattaatt ggagtacgaa tgtaallaaa	5100
actorattot ogcattocta agtoatttag totggactot goagoatgta ggioggoago	5160
tcccactttc tcaaagacca ctgatggagg agtagtaaaa atggagaccg attcagaaca	5220
accaacggag tgttgccgaa gaaactgatg gaaataatgc atgaattgtg tggtggacat	5280
ttttttaaa tacataaact acttcaaatg aggtcggaga aggtcagtgt tttattagca	5340
gccataaaac caggtgagcg agtaccattt ttctctacaa gaaaaacgat tctgagctct	5400
gcgtaagtat aagttctcca tagcggctga agctcccccc tggctgcctg ccatctcagc	5460
tggagtgcag tgccatttcc ttggggtttc tctcacagca gtaatgggac aatacttcac	5520
aaaaattctt tcttttcctg tcatgtggga tccctactgt gccctcctgg ttttacgtta	5580
cccctgact gttccattca gcggtttgga aagagaaaaa gaatttggaa ataaaacatg	5640
cccctgact gttccattca gcggtttgga augustumu 5	5700
tctacgttat cacctcctcc agcattttgg tttttaatta tgtcaataac tggcttagat	5760
ttggaaatga gagggggttg ggtgtattac cgaggaacaa aggaaggctt atataaactc	5820
aagtotttta tttagagaac tggcaagotg toaaaaacaa aaaggootta coaccaaatt	5880
aagtgaatag ccgctatagc cagcagggcc agcacgaggg atggtgcact gctggcacta	5940
tgccacggcc tgcttgtgac tctgagagca actgctttgg aaatgacagc acttggtgca	
atttcctttg tttcagaatg cgtagagcgt gtgcttggcg acagtttttc tagttaggcc	
acticititt teettetee eteattetee taageatgte teeatgetgg taateeeage	. 0000
caantgaacg ttcaaacaat gaatccatca ctgtaggatt ctcgtggtga tcaaalcii	_ 0120
ototoaggic tataaaatat ggaagcttat ttatttttcg ttcttccata tcagictic	0100
ctatgacaat tcacatccac cacagcaaat taaaggtgaa ggaggctggt gggatgaaga	a 6240
7272 22	

025CIP SEQ List.txt aggregating against gagetgtaga	6300
gggtcttcta gctttacgtt cttccttgca aggccacagg aaaatgctga gagctgtaga	6360
atacagcctg gggtaagaag ttcagtctcc tgctgggaca gctaaccgca tcttataacc	6420
ccttctgaga ctcatcttag gaccaaatag ggtctatctg gggtttttgt tcctgctgtt	6480
cctcctggaa ggctatctca ctatttcact gctcccacgg ttacaaacca aagatacagc	6540
ctgaattttt tctaggccac attacataaa tttgacctgg taccaatatt gttctctata	6600
tagttatttc cttccccact gtgtttaacc ccttaaggca ttcagaacaa ctagaatcat	6660
agaatggttt ggattggaag gggccttaaa catcatccat ttccaaccct ctgccatggg	6720
ctgcttgcca cccactggct caggctgccc agggccccat ccagcctggc cttgagcacc	6780
tccagggatg gggcacccac agcttctctg ggcagcctgt gccaacacct caccactctc	6840
tgggtaaaga attctcttt aacatctaat ctaaatctct tctcttttag tttaaagcca	6900
ttcctctttt tcccgttgct atctgtccaa gaaatgtgta ttggtctccc tcctgcttat	6960
aagcaggaag tactggaagg ctgcagtgag gtctccccac agccttctct tctccaggct	7020
gaacaagccc agctccttca gcctgtcttc gtaggagatc atcttagtgg ccctcctctg	7080
gacccattcc aacagttcca cggctttctt gtggagcccc aggtctggat gcagtacttc	7140
agatggggcc ttacaaaggc agagcagatg gggacaatcg cttacccctc cctgctggct	7200
gccctgttt tgatgcagcc cagggtactg ttggcctttc aggctcccag accccttgct	7260
gatttgtgtc aagcttttca tccaccagaa cccacgcttc ctggttaata cttctgccct	7320
cacticigta agcitgitte aggagactic cattetitag gacagactgi gitacaccta	7380
cctgccctat tcttgcatat atacatttca gttcatgttt cctgtaacag gacagaatat	7440
gtattcctct aacaaaaata catgcagaat tcctagtgcc atctcagtag ggttttcatg	7500
gcagtattag cacatagtca atttgctgca agtaccttcc aagctgcggc ctcccataaa	7560
tectotatit gggateagtt accttttggg gtaagetttt gtatetgeag agaeeetggg	
ggttctgatg tgcttcagct ctgctctgtt ctgactgcac cattttctag atcacccagt	7620
tottectota caactteett gteeteeate ettteeeage tigtatetti gacaaalaea	, 000
gocctatttt tgtgtttgct tcagcagcca tttaattctt cagtgtcatc ttgttctgtt	7740
gatgccactg gaacaggatt ttcagcagtc ttgcaaagaa catctagctg aaaactiicu	, 7000
gccattcaat attcttacca gttcttcttg tttgaggtga gccataaatt actagaacti	. 7000
cotcactoac aagtttatoc attttattac ttctattato tacttacttt gacataacac	, /320
agacacgcac atattttgct gggatttcca cagtgtctct gtgtccttca catggtttt	1 7 300
ctgtcatact tccgttataa ccttggcaat ctgcccagct gcccatcaca agaaaagag	a 0070
ttccttttt attacttctc ttcagccaat aaacaaaatg tgagaagccc aaacaagaa	C 0100
Annuage gottoccate aagggagaga cagetgaagg gttgtgtage teaatagaa	t 8160
ttgtggggca ggctgccate aagggasts Page 23	

taagaaataa taaagctgtg tcagacagtt ttgcctgatt tatacaggca cgccccaagc 822	20
cagagagget gtetgecaag gecacettge agteettggt ttgtaagata agteataggt 828	80
cagagagget gtetgecaag gelactige agtettiggs to same cagagagget tettgetgtt tactatggta 83	40
aacttttctg gtgaattgcg tggagaatca tgatggcagt tcttgctgtt tactatggta 83	00
agatgctaaa ataggagaca gcaaagtaac acttgctgct gtaggtgctc tgctatccag 84	160
acagcgatgg cactcgcaca ccaagatgag ggatgctccc agctgacgga tgctggggca 84	520
granting gtcccatgct gcctgctcat tagcatcacc tcagcctca coagcona	580
agaggatea teceaagetg aggaaagttg eteatettet teatateate addessess	640
cotnactnat acctecegga tgettaaatg tggtcactga calellate teestasya	700
ttcaantcan aacctccgga tcaggaggga acacatagtg ggaatgtacc cicagcica o	760
anguagete tecetteaat gateatgeat getacttagg aaggtgtgtg tylglydaly	820
tagaattgcc titgttattt titcttcctg ctgtcaggaa cattitgaat accagagaan o	880
aagaaaagtg ctcttcttgg catgggagga gttgtcacac ttgcaaaata aaggatgcag	
toccapatot toataatoto agggtotgaa ggaggatoag aaactgtgta tacaatitoa o	1940
goettetetg aatgeagett ttgaaagetg tteetggeeg aggeagtaet agleagaace s	9000
ctcopaaaca qqaacaaatg tcttcaaggt gcagcaggag gaaacacctt gcctatcatg	9060
agantogata accactgccg ctgaaggaat ccagctcctg tttgagcagg tgctgcacac	9120
toccacacto agacaacagt toattttat aggacttcca ggaaggatet tellellaag	9180
cttettaatt atggtacate teeagttgge agatgaetat gaetaetgae aggagaatga	9240
ggaactagct gggaatattt ctgtttgacc accatggagt cacccatttc tttactggta	9300
tttggaaata ataattctga attgcaaagc aggagttagc gaagatcttc atttcttcca	9360
tgttggtgac agcacagttc tggctatgaa agtctgctta caaggaagag gataaaaatc	9420
atagggataa taaatctaag tttgaagaca atgaggtttt agctgcattt gacatgaaga	9480
aattgagacc tctactggat agctatggta tttacgtgtc tttttgctta gttacttatt	9540
gaccccagct gaggtcaagt atgaactcag gtctctcggg ctactggcat ggattgatta	9600
catacaactg taattttagc agtgatttag ggtttatgag tacttttgca gtaaatcata	9660
gggttagtaa tgttaatctc agggaaaaaa aaaaaaaagcc aaccctgaca gacatcccag	9720
ctcaggtgga aatcaaggat cacagctcag tgcggtccca gagaacacag ggactcttct	9780
ctcaggtgga aatcaaggat cacagctcag tgcggcoon 5 5	9840
cttaggacct ttatgtacag ggcctcaaga taactgatgt tagtcagaag actttccatt	9900
ctggccacag ttcagctgag gcaatcctgg aattttctct ccgctgcaca gttccagtca	9960
tcccagtttg tacagttctg gcactttttg ggtcaggccg tgatccaagg agcagaagtt	10020
ccagctatgg tcagggagtg cctgaccgtc ccaactcact gcactcaaac aaaggcgaaa	

ccacaagagt ggcttttgtt gaaattgcag tgtggcccag aggggctgca ccagtactgg 10080 attgaccacg aggcaacatt aatcctcagc aagtgcaatt tgcagccatt aaattgaact 10140 10200 aactgatact acaatgcaat cagtatcaac aagtggtttg gcttggaaga tggagtctag gggctctaca ggagtagcta ctctctaatg gagttgcatt ttgaagcagg acactgtgaa 10260 10320 aagctggcct cctaaagagg ctgctaaaca ttagggtcaa ttttccagtg cactttctga 10380 agtgtctgca gttccccatg caaagctgcc caaacatagc acttccaatt gaatacaatt atatgcaggc gtactgcttc ttgccagcac tgtccttctc aaatgaactc aacaaacaat 10440 ttcaaagtct agtagaaagt aacaagcttt gaatgtcatt aaaaagtata tctgctttca 10500 gtagttcagc ttatttatgc ccactagaaa catcttgtac aagctgaaca ctggggctcc 10560 10620 agattagtgg taaaacctac tttatacaat catagaatca tagaatggcc tgggttggaa gggaccccaa ggatcatgaa gatccaacac ccccgccaca ggcagggcca ccaacctcca 10680 10740 gatctggtac tagaccaggc agcccagggc tccatccaac ctggccatga acacctccag ggatggagca tccacaacct ctctgggcag cctgtgccag cacctcacca ccctctctgt 10800 gaagaacttt tccctgacat ccaatctaag ccttccctcc ttgaggttag atccactccc 10860 ccttgtgcta tcactgtcta ctcttgtaaa aagttgattc tcctcctttt tggaaggttg 10920 caatgaggtc tccttgcagc cttcttctct tctgcaggat gaacaagccc agctccctca 10980 gcctgtcttt ataggagagg tgctccagcc ctctgatcat ctttgtggcc ctcctctgga 11040 11100 cccgctccaa gagctccaca tctttcctgt actgggggcc ccaggcctga atgcagtact ccagatgggg cctcaaaaga gcagagtaaa gagggacaat caccttcctc accctgctgg 11160 ccagccctct tctgatggag ccctggatac aactggcttt ctgagctgca acttctcctt 11220 atcagttcca ctattaaaac aggaacaata caacaggtgc tgatggccag tgcagagttt 11280 ttcacacttc ttcatttcgg tagatcttag atgaggaacg ttgaagttgt gcttctgcgt 11340 gtgcttcttc ctcctcaaat actcctgcct gatacctcac cccacctgcc actgaatggc 11400 11460 tccatggccc cctgcagcca gggccctgat gaacccggca ctgcttcaga tgctgtttaa 11520 tagcacagta tgaccaagtt gcacctatga atacacaaac aatgtgttgc atccttcagc 11580 acttgagaag aagagccaaa tttgcattgt caggaaatgg tttagtaatt ctgccaatta aaacttgttt atctaccatg gctgtttta tggctgttag tagtggtaca ctgatgatga 11640 11700 acaatggcta tgcagtaaaa tcaagactgt agatattgca acagactata aaattcctct gtggcttagc caatgtggta cttcccacat tgtataagaa atttggcaag tttagagcaa 11760 tgtttgaagt gttgggaaat ttctgtatac tcaagagggc gtttttgaca actgtagaac 11820 agaggaatca aaagggggtg ggaggaagtt aaaagaagag gcaggtgcaa gagagcttgc 11880 agtcccgctg tgtgtacgac actggcaaca tgaggtcttt gctaatcttg gtgctttgct 11940

023CH SEQ E-15-15
tectoreect ggetgeetta gggtgegate tgeetcagae ceaeageetg ggeagangs
ggaccetgat getgetgget cagatgagga gaatcageet gtttagetge etgaaggaea =======
ggcacgattt tggctttcct caagaggagt ttggcaacca gtttcagaag gctgagacca in
tecetotoct geacgagatg atceageaga tetttaacet gittageace aaggatagea 22200
acactactta agatgagacc ctgctggata agttttacac cgagctgtac caycagctga ======
accatctona ggcttgcgtg atccagggcg tgggcgtgac cgagacccct clgatgaagg 12300
aggatageat cotggotgtg aggaagtact ttoagaggat caccotgtae clydaggaga 22300
areagtacag cocctococt toggaagtog tgagggctga gatcatgagg agcittagee areag
tgagcaccaa cctgcaagag agcttgaggt ctaaggagta aaaagtctag agtcggggcg 12480
gccggccgct tcgagcagac atgataagat acattgatga gtttggacaa accacaacta 12540
gaatgcagtg aaaaaaatgc tttatttgtg aaatttgtga tgctattgct ttatttgtaa 12600
ccattataag ctgcaataaa caagttaaca acaacaattg cattcatttt atgtttcagg 12660
ttcaggggga ggtgtgggag gtttttaaa gcaagtaaaa cctctacaaa tgtggtaaaa 12720
tcaggggga ggtgtgggag getetetam y be tcagggggag ggtgtgggag getetetam y be tcaggggga ggtgtgggag getetetam y be tcagggggag getetetam y be tcagggggag ggtgtgggag getetetam y be tcagggggag ggtgtgggaggggggggggggggggggg
tcgataagga tccgtcgatc gatgetootg as s tgggcgcggg gcatgactat cgtcgccgca cttatgactg tcttctttat catgcaactc 12840
gtaggacagg tgccggcagc gctcttccgc ttcctcgctc actgactcgc tgcgctcggt 12900
gtaggacagg tgccggcagc gctcttccgc ttoods cgttcggctg cggcgagcgg tatcagctca ctcaaaggcg gtaatacggt tatccacaga 12960
cgttcggctg cggcgagcgg tatcagctca ctcaudgges 5
atcaggggat aacgcaggaa agaacatgtg agcaaaaggc cagcaaaagg ccaggaaccg 13020
taaaaaggcc gcgttgctgg cgtttttcca taggctccgc cccctgacg agcatcacaa 13080
aaatcgacgc tcaagtcaga ggtggcgaaa cccgacagga ctataaagat accaggcgtt 13140
tcccctgga agctccctcg tgcgctctcc tgttccgacc ctgccgctta ccggatacct 13200
gtccgccttt ctcccttcgg gaagcgtggc gctttctcaa tgctcacgct gtaggtatct 13260
cagttcggtg taggtcgttc gctccaagct gggctgtgtg cacgaacccc ccgttcagcc 13320
cgaccgctgc gccttatccg gtaactatcg tcttgagtcc aacccggtaa gacacgactt 13380
atcoccacto gcagcagcca ctggtaacag gattagcaga gcgaggtatg taggagg
tacagagete ttgaagtggt ggcctaacta eggctacact agaaggacag tacagg
ctorocticto ctoaagccag ttaccttcgg aaaaagagtt gglagcicti gateeggena
acaaaccacc gctggtagcg gtggtttttt tgtttgcaag cagcagatta cycycagaaa 13010
agaggatet caagaagate etttgatett ttetaegggg tetgaegete agrygaaega issoo
agacticacut taagggattt tggtcatgag attatcaaaa aggatcttca cclayaccci iss is
tttaaattaa aaatgaagtt ttaaatcaat ctaaagtata tatgagtaaa cttggtctga 13800
Page 26

canttaccaa	tocttaatca	ataaaacacc	tatctcagcg	atctatctat	ttcgttcatc	13860
						13920
			aactacgata			13980
			acgctcaccg			14040
			aagtggtcct			
			agtaagtagt			14100
			ggtgtcacgc			14160
attcagctcc	ggttcccaac	gatcaaggcg	agttacatga	tccccatgt	tgtgcaaaaa	14220
agcggttagc	tccttcggtc	ctccgatcgt	tgtcagaagt	aagttggccg	cagtgttatc	14280
actcatggtt	atggcagcac	tgcataattc	tcttactgtc	atgccatccg	taagatgctt	14340
ttctgtgact	ggtgagtact	caaccaagtc	attctgagaa	tagtgtatgc	ggcgaccgag	14400
ttgctcttgc	ccggcgtcaa	tacgggataa	taccgcgcca	catagcagaa	ctttaaaagt	14460
gctcatcatt	ggaaaacgtt	cttcggggcg	aaaactctca	aggatcttac	cgctgttgag	14520
atccagttcg	atgtaaccca	ctcgtgcacc	caactgatct	tcagcatctt	ttactttcac	14580
cagcgtttct	gggtgagcaa	aaacaggaag	gcaaaatgcc	gcaaaaaagg	gaataagggc	14640
gacacggaaa	tgttgaatac	tcatactctt	cctttttcaa	tattattgaa	gcatttatca	14700
gggttattgt	ctcatgagcg	gatacatatt	tgaatgtatt	tagaaaaata	aacaaatagg	14760
			acctgacgcg			14820
			gaccgctaca			14880
			cgccacgttc			14940
			g atttagtgct			15000
			g tgggccatcg			15060
			a tagtggactc			15120
			a tttataaggg			15180
			a atttaacgcg			15240
			t gcgcaactgt			15300
			t accatgataa			15360
			t agtggatcco			
			t ttgtgtgaat			
			a ctagcaaaa			
			g gtaccgagc			
			g caattagcc			
gcataaatc	a atattggct	a LLYYCLALL	g catacgttg Page	27		

atttatattg gctcatgtcc aatatgaccg ccatgttgac attgattatt gactagttat 15780
taatagtaat caattacggg gtcattagtt catagcccat atatggagtt ccgcgttaca 15840
taatagtaat caattacggg gecareages and taacttacgg taaatggccc gcctggctga ccgcccaacg acccccgccc attgacgtca 15960
taacttacgg taaatggccc gcctggctga cegeedads and staacgg taaatgggtg 15960
ataatgacgt atgttcccat agtaacgcca atagggactt tccattgacg tcaatgggtg 15960
gagtatttac ggtaaactgc ccacttggca gtacatcaag tgtatcatat gccaagtccg 16020
cccctattg acgtcaatga cggtaaatgg cccgcctggc attatgccca gtacatgacc 16080
tracoggact ttcctacttg gcagtacatc tacgtattag tcategetat tacguess
atgraggtttt ggcagtacat caatgggcgt ggatagcggt ttgactcacg gggataling
agtotocaco coattgacgt caatgggagt ttgttttggc accadance acgggadoo
ccaaaatgtc gtaacaactc cgccccattg acgcaaatgg gcggtaggcg tgtucgg s
naggtotata taagcagago togtttagtg aaccgtcaga togcolggag acgoods
coctottttg acctccatag aagacaccgg gaccgatcca gcctccccc gaageers
tctaggggct cgagatctgc gatctaagta agcttgcatg cctgcaggtc ggccgccacg 10300
accuptocco ccaccatccc ctgacccacg cccctgaccc ctcacaagga gacgaccttc 16300
catgaccgag tacaagccca cggtgcgcct cgccacccgc gacgacgtcc cccgggccgt 16020
acgcaccete geogeoget tegeogaeta eccegeoaeg egeoaeaeg tegaecegga 10000
ccaccacate gagegggtea eegagetgea agaactette eteaegegeg tegggetega 10740
categgcaag gtgtgggtcg cggacgacgg cgccgcggtg gcggtctgga ccacgccgga 16600
gagcgtcgaa gcgggggcgg tgttcgccga gatcggcccg cgcatggccg agttgagcgg 10000
ttcccggctg gccgcgcagc aacagatgga aggcctcctg gcgccgcacc ggcccaayya 10320
gcccgcgtgg ttcctggcca ccgtcggcgt ctcgcccgac caccagggca agggtctggg 16980
cancinciate atactececa gagtagagge gaccaagege accagagatae ecacetteet 17040
ggagacetec gegeeeegea aceteceett etaegagegg eteggettea eegteaeege 17100
cgacgtcgag gtgcccgaag gaccgcgcac ctggtgcatg acccgcaagc ccggtgcctg 17160
acgcccgcc cacgacccgc agcgcccgac cgaaaggagc gcacgacccc atggctccga 17220
ccgaagccga cccgggggc cccgccgacc ccgcacccgc ccccgaggcc caccgactct 17280
agagtcgggg cggccggccg cttcgagcag acatgataag atacattgat gagtttggac 17340
agagtegggg eggeeggeeg etters 5
ctttatttgt aaccattata agctgcaata aacaagttaa caacaacaat tgcattcatt 17460
ttatgttca ggttcagggg gaggtgtggg aggttttta aagcaagtaa aacctctaca 17520
aatgtggtaa aatcgataag gatcaattcg gcttcaggta ccgtcgacga tgtaggtcac 17580
aatgtggtaa aatcgataag gatcaatteg gettedggth 45 5

O25CIP SEQ List.txt ggtctcgaag ccgcggtgcg ggtgccaggg cgtgcccttg ggctccccgg gcgcgtactc 1764	10
cacctcaccc atctggtcca tcatgatgaa cgggtcgagg tggcggtagt tgatcccggc 1770	)0
gaacgcgcgg cgcaccggga agccctcgcc ctcgaaaccg ctgggcgcgg tggtcacggt 1776	50
gagcacggga cgtgcgacgg cgtcggcggg tgcggatacg cggggcagcg tcagcgggtt 1782	20
ctcgacggtc acggcgggca tgtcgacagc cgaattgatc cgtcgaccga tgcccttgag 1788	30
agccttcaac ccagtcagct ccttccggtg ggcgcggggc atgactatcg tcgccgcact 1794	10
tatgactgtc ttctttatca tgcaactcgt aggacaggtg ccggcagcgc tcttccgctt 1800	)0
cctcgctcac tgactcgctg cgctcggtcg ttcggctgcg gcgagcggta tcagctcact 1800	50
caaaggcggt aatacggtta tccacagaat caggggataa cgcaggaaag aacatg 1813	<b>16</b>
<210> 8 <211> 17402 <212> DNA <213> Plasmid pOMIFN-Ins-CMV-pur-attB	
ggccgccacc gcggtggagc tccaattcgc cctatagtga gtcgtattac aattcactgg	60
ccgtcgtttt acaacgtcgt gactgggaaa accctggcgt tacccaactt aatcgccttg $^{-12}$	20
cagcacatcc ccctttcgcc agctggcgta atagcgaaga ggcccgcacc gatcgccctt 1	80
cccaacagtt gcgcagcctg aatggcgaat gggacgcgcc ctgtagcggc gcattaagcg 24	40
cggcgggtgt ggtggttacg cgcagcgtga ccgctacact tgccagcgcc ctagcgcccg 3	00
ctcctttcgc tttcttccct tcctttctcg ccacgttcgc cggctttccc cgtcaagctc 3	60
taaatcgggg gctcccttta gggttccgat ttagtgcttt acggcacctc gaccccaaaa 4	20
aacttgatta gggtgatggt tcacgtagtg ggccatcgcc ctgatagacg gtttttcgcc 4	80
ctttgacgtt ggagtccacg ttctttaata gtggactctt gttccaaact ggaacaacac 5	40
tcaaccctat ctcggtctat tcttttgatt tataagggat tttgccgatt tcggcctatt 6	00
ggttaaaaaa tgagctgatt taacaaaaat ttaacgcgaa ttttaacaaa atattaacgc 6	60
ttacaattta ggtggcactt ttcggggaaa tgtgcgcgga acccctattt gtttatttt 7	20
ctaaatacat tcaaatatgt atccgctcat gagacaataa ccctgataaa tgcttcaata 7	80
atattgaaaa aggaagagta tgagtattca acatttccgt gtcgccctta ttcccttttt 8	40
tgcggcattt tgccttcctg tttttgctca cccagaaacg ctggtgaaag taaaagatgc 9	00
tgaagatcag ttgggtgcac gagtgggtta catcgaactg gatctcaaca gcggtaagat 9	60
ccttgagagt tttcgccccg aagaacgttt tccaatgatg agcactttta aagttctgct 10	20
atgtggcgcg gtattatccc gtattgacgc cgggcaagag caactcggtc gccgcataca 10	080

1140

ctattctcag aatgacttgg ttgagtactc accagtcaca gaaaagcatc ttacggatgg

025CIP SEQ List.txt catgacagta agagaattat gcagtgctgc cataaccatg agtgataaca ctgcggccaa	1200
cttacttctg acaacgatcg gaggaccgaa ggagctaacc gcttttttgc acaacatggg	1260
ggatcatgta actcgccttg atcgttggga accggagctg aatgaagcca taccaaacga	1320
cgagcgtgac accacgatgc ctgtagcaat ggcaacaacg ttgcgcaaac tattaactgg	1380
cgaactactt actctagctt cccggcaaca attaatagac tggatggagg cggataaagt	1440
tgcaggacca cttctgcgct cggcccttcc ggctggctgg tttattgctg ataaatctgg	1500
agccggtgag cgtgggtctc gcggtatcat tgcagcactg gggccagatg gtaagccctc	1560
ccgtatcgta gttatctaca cgacggggag tcaggcaact atggatgaac gaaatagaca	1620
gatcgctgag ataggtgcct cactgattaa gcattggtaa ctgtcagacc aagtttactc	1680
atatatactt tagattgatt taaaacttca tttttaattt aaaaggatct aggtgaagat	1740
cctttttgat aatctcatga ccaaaatccc ttaacgtgag ttttcgttcc actgagcgtc	1800
agaccccgta gaaaagatca aaggatcttc ttgagatcct ttttttctgc gcgtaatctg	1860
ctgcttgcaa acaaaaaaac caccgctacc agcggtggtt tgtttgccgg atcaagagct	1920
accaactctt tttccgaagg taactggctt cagcagagcg cagataccaa atactgtcct	1980
tctagtgtag ccgtagttag gccaccactt caagaactct gtagcaccgc ctacatacct	2040
cgctctgcta atcctgttac cagtggctgc tgccagtggc gataagtcgt gtcttaccgg	2100
gttggactca agacgatagt taccggataa ggcgcagcgg tcgggctgaa cggggggttc	2160
gtgcacacag cccagcttgg agcgaacgac ctacaccgaa ctgagatacc tacagcgtga	2220
gctatgagaa agcgccacgc ttcccgaagg gagaaaggcg gacaggtatc cggtaagcgg	2280
cagggtcgga acaggagagc gcacgaggga gcttccaggg ggaaacgcct ggtatcttta	2340
tagtcctgtc gggtttcgcc acctctgact tgagcgtcga tttttgtgat gctcgtcagg	2400
ggggcggagc ctatggaaaa acgccagcaa cgcggccttt ttacggttcc tggccttttg	2460
ctggcctttt gctcacatgt tctttcctgc gttatcccct gattctgtgg ataaccgtat	2520
taccgccttt gagtgagctg ataccgctcg ccgcagccga acgaccgagc gcagcgagtc	2580
agtgagcgag gaagcggaag agcgcccaat acgcaaaccg cctctccccg cgcgttggcc	2640
gattcattaa tgcagctggc acgacaggtt tcccgactgg aaagcgggca gtgagcgcaa	2700
cgcaattaat gtgagttagc tcactcatta ggcaccccag gctttacact ttatgcttcc	2760
ggctcgtatg ttgtgtggaa ttgtgagcgg ataacaattt cacacaggaa acagctatga	2820
ccatgattac gccaagctcg aaattaaccc tcactaaagg gaacaaaagc tgggtaccgg	2880
gcccccctc gactagaggg acagcccccc cccaaagccc ccagggatgt aattacgtcc	2940
ctccccgct agggggcagc agcgagccgc ccggggctcc gctccggtcc ggcgctcccc	3000
consistence gageeggeag catocoggga cageeeggge acggggaagg tggcaeggga	3060
Page 30	

tcgctttcct ctgaacgctt ctcgctgctc tttgagcctg cagacacctg ggggggatacg	3120
gggaaaaagc tttaggctga aagagagatt tagaatgaca gaatcataga acggcctggg	3180
ttgcaaagga gcacagtgct catccagatc caaccccctg ctatgtgcag ggtcatcaac	3240
cagcagccca ggctgcccag agccacatcc agcctggcct tgaatgcctg cagggatggg	3300
gcatccacag cctccttggg caacctgttc agtgcgtcac caccctctgg gggaaaaact	3360
gcctcctcat atccaaccca aacctcccct gtctcagtgt aaagccattc ccccttgtcc	3420
tatcaagggg gagtttgctg tgacattgtt ggtctggggt gacacatgtt tgccaattca	3480
gtgcatcacg gagaggcaga tcttggggat aaggaagtgc aggacagcat ggacgtggga	3540
catgcaggtg ttgagggctc tgggacactc tccaagtcac agcgttcaga acagccttaa	3600
ggataagaag ataggataga aggacaaaga gcaagttaaa acccagcatg gagaggagca	3660
ggataagaag ataggataga aggataaaga gcaagttaaa ataatatta atagtatta	3720
caaaaaggcc acagacactg ctggtccctg tgtctgagcc tgcatgtttg atggtgtctg	3780
gatgcaagca gaaggggtgg aagagcttgc ctggagagat acagctgggt cagtaggact	3840
gggacaggca gctggagaat tgccatgtag atgttcatac aatcgtcaaa tcatgaaggc	3900
tggaaaagcc ctccaagatc cccaagacca accccaaccc acccaccgtg cccactggcc	3960
atgtccctca gtgccacatc cccacagttc ttcatcacct ccagggacgg tgaccccccc	4020
acctccgtgg gcagctgtgc cactgcagca ccgctctttg gagaaggtaa atcttgctaa	4080
atccagcccg accetecect ggcacaacgt aaggecatta teteteatee aactecagga	4140
cggagtcagt gaggatgggg ctctagtcga ggtcgacggt atcgataagc ttgattaggc	4200
agagcaatag gactctcaac ctcgtgagta tggcagcatg ttaactctgc actggagtcc	4260
agcgtgggaa acaatctgcc ttgcacatga gtcttcgtgg gccaatattc cccaacggtt	4320
ttccttcagc ttgtcttgtc tcctaagctc tcaaaacacc tttttggtga ataaactcac	4380
ttggcaacgt ttatctgtct taccttagtg tcacgtttca tccctattcc cctttctcct	
cctccgtgtg gtacacagtg gtgcacactg gttcttctgt tgatgttctg ctctgacagc	4440
caatgtgggt aaagttcttc ctgccacgtg tctgtgttgt tttcacttca aaaagggccc	4500
tgggctcccc ttggagctct caggcatttc cttaatcatc acagtcacgc tggcaggatt	4560
agtccctcct aaaccttaga atgacctgaa cgtgtgctcc ctctttgtag tcagtgcagg	4620
gagacgtttg cctcaagatc agggtccatc tcacccacag ggccattccc aagatgaggt	4680
ggatggttta ctctcacaaa aagttttctt atgtttggct agaaaggaga actcactgcc	4740
tacctgtgaa ttcccctagt cctggttctg ctgccactgc tgcctgtgca gcctgtccca	4800
tggagggggc agcaactgct gtcacaaagg tgatcccacc ctgtctccac tgaaatgacc	4860
tcagtgccac gtgttgtata gggtataaag tacgggaggg ggatgcccgg ctcccttcag	4920

gcacagcagc tccagctcca tgcagtactc acagctggtg cagccctcgg ctccagggtc 6	900
gcacagcagc tccagctcca tycagtacte acagorys 5	960
tgagcagtgc tgggactcac gaggttccat gtctttcaca ctgataatgg tccaatttct 6	020
ggaatgggtg cccatccttg gaggtcccca aggccaggct ggctgcgtct ccgagcagcc 7	7080
cgatctggtg gtgagtagcc agcccatggc aggagttaga gcctgatggt ctttaaggtc 7	7140
ccttccaacc taagccatcc tacgattcta ggaatcatga cttgtgagtg tgtattgcag	7200
aggcaatatt ttaaagttat aaatgttttc tccccttcct tgtttgtcaa agttatcttg	7260
atcoccttat caatgctttt ggagtctcca gtcatttttc ttacamcaaa aagaggagga	7320
agaatgaaga gaatcattta atttcttgat tgaatagtag gallcagaaa gelgeagga	7380
atoccotete titigtatega getgtaaggt tieteateat italeagege ggedduur	7440
aggactitic catcigatgi ggaaaaaaaa atccttatca tetacagtee eigeneen	7500
acatcoctca gactctttac caaaaaagct ataggtttta aaactacatc tgctgalaal	7560
ttgccttgtt ttagctcttc ttccatatgc tgcgtttgtg agaggtgcgt ggatgggctt	
agactictical ctgctgagct tgatgggtgc ttaagaatga agcactcact gctgaaactg	7620
tittcatttc acaggaatgt tttagtggca ttgttttat aactacatat tcctcagala	7680
aatgaaatcc agaaataatt atgcaaactc actgcatccg ttgcacaggt ctttatctgc	7740
tagcaaagga aataatttgg ggatggcaaa aacattcctt cagacatcta tattlaaayy	7800
aatataatcc tggtacccac ccacttcatc cctcattatg ttcacactca gagatactca	7860
ttctcttgtt gttatcattt gatagcgttt tctttggttc tttgccacgc tctgggctat	7920
ggctgcacgc tctgcactga tcagcaagta gatgcgaggg aagcagcagt gagaggggct	7980
gccctcagct ggcacccagc cgctcagcct aggaggggac cttgcctttc caccagctga	8040
ggtgcagccc tacaagctta cacgtgctgc gagcaggtga gcaaagggag tcttcatggt	8100
gtgtttcttg ctgcccggaa gcaaaacttt actttcattc attccccttg aagaatgagg	8160
aatgtttgga aacggactgc tttacgttca atttctctct tccctttaag gctcagccag	8220
gggccattgc tgaggacggc atcggggccc cctggaccaa atctgtggca cagatggttt	8280
cacttacatc agtggatgtg ggatctgcgc ctgtaatgtg tccttctgaa ggaaggaacg	8340
tgccttccaa gtgccagccc cacagccccc agcccctccc tgtgctgctc caattcatct	8400
cctcttcctc cttctcctt tgctgtttgt gctcgggtag aaatcatgaa gatttagaag	8460
agaaaacaaa ataactggag tggaaaccca ggtgatgcag ttcattcagc tgtcataggt	8520
ttgtcgttgc tataggtctg tatcagagat gctarcacca ctttgctgtc ggtgcttaac	8580
ttgtcgttgc tataggtctg tatcagagat getal edeal of the state	8640
tegggtgaac teteetteac legeareact tyegggers anacttteec tettteagag	8700
tcaccctctg ggaaaatggg cgcactggat ctctaatgga agactttccc tctttcagag	
FAUC 33	

8760

cctgtgggat gtgcagtgac aagaaacgtg gaggggctga gcagcagcac tgcccccagg gagcaggagc ggatgccatc ggtggcagca tcccaaatga tgtcagcgga tgctgagcag 8820 gcagcggacg aacggacaga agcgatgcgt acaccttctg ttgacatggt atttggcagc 8880 gatttaacac tcgcttccta gtcctgctat tctccacagg ctgcattcaa atgaacgaag 8940 ggaagggagg caaaaagatg caaaatccga gacaagcagc agaaatattt cttcgctacg 9000 9060 gaagcgtgcg caaacaacct tctccaacag caccagaaga gcacagcgta acctttttca agaccagaaa aggaaattca caaagcctct gtggatacca gcgcgttcag ctctcctgat 9120 agcagatttc ttgtcaggtt gcgaatgggg tatggtgcca ggaggtgcag ggaccatatg 9180 atcatataca gcacagcagt cattgtgcat gtattaatat atattgagta gcagtgttac 9240 tttgccaaag caatagttca gagatgagtc ctgctgcata cctctatctt aaaactaact 9300 tataaatagt aaaaccttct cagttcagcc acgtgctcct ctctgtcagc accaatggtg 9360 cttcgcctgc acccagctgc aaggaatcag cccgtgatct cattaacact cagctctgca 9420 ggataaatta gattgttcca ctctctttg ttgttaatta cgacggaaca attgttcagt 9480 gctgatggtc ctaattgtca gctacagaaa acgtctccat gcagttcctt ctgcgccagc 9540 aaactgtcca ggctatagca ccgtgatgca tgctacctct cactccatcc ttcttctctt 9600 tcccaccagg gagagctgtg tgttttcact ctcagccact ctgaacaata ccaaactgct 9660 acgcactgcc tccctcggaa agagaatccc cttgttgctt ttttatttac aggatccttc 9720 ttaaaaagca gaccatcatt cactgcaaac ccagagcttc atgcctctcc ttccacaacc 9780 9840 gaaaacagcc ggcttcattt gtctttttta aatgctgttt tccaggtgaa ttttggccag cgtgttggct gagatccagg agcacgtgtc agctttctgc tctcattgct cctgttctgc 9900 attgcctctt tctggggttt ccaagagggg gggagacttt gcgcggggat gagataatgc 9960 cccttttctt agggtggctg ctgggcagca gagtggctct gggtcactgt ggcaccaatg 10020 ggaggcacca gtgggggtgt gttttgtgca ggggggaagc attcacagaa tggggctgat 10080 cctgaagctt gcagtccaag gctttgtctg tgtacccagt gaaatccttc ctctgttaca 10140 taaagcccag ataggactca gaaatgtagt cattccagcc cccctcttcc tcagatctgg 10200 agcagcactt gtttgcagcc agtcctcccc aaaatgcaca gacctcgccg agtggaggga 10260 10320 gatgtaaaca gcgaaggtta attacctcct tgtcaaaaac actttgtggt ccatagatgt 10380 ttctgtcaat cttacaaaac agaaccgaga ggcagcgagc actgaagagc gtgttcccat gctgagttaa tgagacttgg cagctcgctg tgcagagatg atccctgtgc ttcatgggag 10440 gctgtaacct gtctccccat cgccttcaca ccgcagtgct gtcctggaca cctcaccctc 10500 cataagctgt aggatgcagc tgcccaggga tcaagagact tttcctaagg ctcttaggac 10560 tcatctttgc cgctcagtag cgtgcagcaa ttactcatcc caactatact gaatgggttt 10620 Page 34

ctgccagctc	tgcttgtttg	tcaataagca	tttcttcatt	ttgcctctaa	gtttctctca	10680
gcagcaccgc	tctgggtgac	ctgagtggcc	acctggaacc	cgaggggcac	agccaccacc	10740
tccctgttgc	tgctgctcca	gggactcatg	tgctgctgga	tggggggaag	catgaagttc	10800
ctcacccaga	cacctgggtt	gcaatggctg	cagcgtgctc	ttcttggtat	gcagattgtt	10860
tccagccatt	acttgtagaa	atgtgctgtg	gaagcccttt	gtatctcttt	ctgtggccct	10920
tcagcaaaag	ctgtgggaaa	gctctgaggc	tgctttcttg	ggtcgtggag	gaattgtatg	10980
ttccttcttt	aacaaaaatt	atccttagga	gagagcactg	tgcaagcatt	gtgcacataa	11040
aacaattcag	gttgaaaggg	ctctctggag	gtttccagcc	tgactactgc	tcgaagcaag	11100
gccaggttca	aagatggctc	aggatgctgt	gtgccttcct	gattatctgt	gccaccaatg	11160
gaggagatto	acagccactc	tgcttcccgt	gccactcatg	gagaggaata	ttcccttata	11220
ttcagataga	atgttatcct	ttagctcagc	cttccctata	accccatgag	ggagctgcag	11280
atccccatac	tctcccttc	tctggggtga	aggccgtgtc	ccccagcccc	ccttcccacc	11340
ctgtgcccta	agcagcccgc	tggcctctgc	tggatgtgtg	cctatatgtc	aatgcctgtc	11400
cttgcagtco	agcctgggac	atttaattca	tcaccagggt	aatgtggaac	tgtgtcatct	11460
tcccctgcag	ggtacaaagt	tctgcacggg	gtcctttcgg	ttcaggaaaa	ccttcactgg	11520
tgctacctga	atcaagctct	atttaataag	ttcataagca	catggatgtg	ttttcctaga	11580
gatacgtttt	aatggtatca	gtgattttta	tttgctttgt	tgcttacttc	aaacagtgcc	11640
tttgggcagg	aggtgaggga	cgggtctgcc	gttggctctg	cagtgatttc	tccaggcgtg	11700
tggctcaggt	cagatagtgg	tcactctgtg	gccagaagaa	ggacaaagat	ggaaattgca	11760
gattgagtca	cgttaagcag	gcatcttgga	gtgatttgag	gcagtttcat	gaaagagcta	11820
cgaccactta	ttgttgttt	ccccttttac	: aacagaagtt	ttcatcaaaa	taacgtggca	11880
aagcccagga	atgtttggga	aaagtgtagt	: taaatgtttt	gtaattcatt	tgtcggagtg	11940
ctaccagcta	a agaaaaaagt	cctacctttg	gtatggtagt	cctgcagaga	atacaacatc	12000
aatattagt	tggaaaaaa	caccaccacc	accagaaact	gtaatggaaa	atgtaaacca	12060
agaaattcc	tgggtaagag	agaaaggatg	, tcgtatactg	gccaagtcct	gcccagctgt	12120
cagcctgct	g accctctgca	gttcaggaco	atgaaacgtg	gcactgtaag	acgtgtcccc	12180
tgcctttgc	t tgcccacaga	tctctgccct	tgtgctgact	cctgcacaca	agagcatttc	12240
cctgtagcc	a aacagcgatt	agccataago	tgcacctgac	tttgaggatt	aagagtttgc	12300
aattaagtg	g attgcagcag	gagatcagt	g gcagggttgc	: agatgaaato	cttttctagg	12360
ggtagctaa	g ggctgagcaa	cctgtccta	c agcacaagco	aaaccagcca	agggttttcc	12420
tgtgctgtt	c acagaggcag	ggccagctg	g agctggagga	a ggttgtgctg	ggacccttct	12480

025CIP SEQ List.txt	
ccctgtgctg agaatggagt gatttctggg tgctgttcct gtggcttgca ctgagcagct	12540
caagggagat cggtgctcct catgcagtgc caaaactcgt gtttgatgca gaaagatgga	12600
tgtgcacctc cctcctgcta atgcagccgt gagcttatga aggcaatgag ccctcagtgc	12660
agcaggagct gtagtgcact cctgtaggtg ctagggaaaa tctctggttc ccagggatgc	12720
attcataagg gcaatatatc ttgaggctgc gccaaatctt tctgaaatat tcatgcgtgt	12780
tcccttaatt tatagaaaca aacacagcag aataattatt ccaatgcctc ccctcgaagg	12840
aaacccatat ttccatgtag aaatgtaacc tatatacaca cagccatgct gcatccttca	12900
gaacgtgcca gtgctcatct cccatggcaa aatactacag gtattctcac tatgttggac	12960
ctgtgaaagg aaccatggta agaaacttcg gttaaaggta tggctgcaaa actactcata	13020
ccaaaacagc agagctccag acctcctctt aggaaagagc cacttggaga gggatggtgt	13080
gaaggctgga ggtgagagac agagcctgtc ccagttttcc tgtctctatt ttctgaaacg	13140
tttgcaggag gaaaggacaa ctgtactttc aggcatagct ggtgccctca cgtaaataag	13200
ttccccgaac ttctgtgtca tttgttctta agatgctttg gcagaacact ttgagtcaat	13260
tcgcttaact gtgactaggt ctgtaaataa gtgctccctg ctgataaggt tcaagtgaca	13320
tttttagtgg tatttgacag catttacctt gctttcaagt cttctaccaa gctcttctat	13380
acttaagcag tgaaaccgcc aagaaaccct tccttttatc aagctagtgc taaataccat	13440
taacttcata ggttagatac ggtgctgcca gcttcacctg gcagtggttg gtcagttctg	13500
ctggtgacaa agcctccctg gcctgtgctt ttacctagag gtgaatatcc aagaatgcag	13560
aactgcatgg aaagcagagc tgcaggcacg atggtgctga gccttagctg cttcctgctg	13620
ggagatgtgg atgcagagac gaatgaagga cctgtccctt actcccctca gcattctgtg	13680
ctatttaggg ttctaccaga gtccttaaga ggttttttt ttttttggtc caaaagtctg	13740
tttgtttggt tttgaccact gagagcatgt gacacttgtc tcaagctatt aaccaagtgt	13800
ccagccaaaa tcaattgcct gggagacgca gaccattacc tggaggtcag gacctcaata	13860
aatattacca gcctcattgt gccgctgaca gattcagctg gctgctccgt gttccagtcc	13920
aacagttcgg acgccacgtt tgtatatatt tgcaggcagc ctcgggggga ccatctcagg	13980
agcagagcac cggcagccgc ctgcagagcc gggcagtacc tcaccatggc tttgaccttt	14040
gccttactgg tggctctcct ggtgctgagc tgcaagagca gctgctctgt gggctgcgat	14100
ctgcctcaga cccacagcct gggcagcagg aggaccctga tgctgctggc tcagatgagg	14160
agaatcagcc tgtttagctg cctgaaggat aggcacgatt ttggctttcc tcaagaggag	14220
tttggcaacc agtttcagaa ggctgagacc atccctgtgc tgcacgagat gatccagcag	14280
atctttaacc tgtttagcac caaggatagc agcgctgctt gggatgagac cctgctggat	14340
agetttaca cogagetgta ccagcagetg aacgatetgg aggettgegt gatecaggge	14400
Page 36	

gtgggcgtga	ccgagacccc	tctgatgaag	gaggatagca	tcctggctgt	gaggaagtac	14460
tttcagagga	tcaccctgta	cctgaaggag	aagaagtaca	gcccctgcgc	ttgggaagtc	14520
gtgagggctg	agatcatgag	gagctttagc	ctgagcacca	acctgcaaga	gagcttgagg	14580
tctaaggagt	aaaaagtcta	gagtcggggc	ggccggccgc	ttcgagcaga	catgataaga	14640
tacattgatg	agtttggaca	aaccacaact	agaatgcagt	gaaaaaaatg	ctttatttgt	14700
gaaatttgtg	atgctattgc	tttatttgta	accattataa	gctgcaataa	acaagttaac	14760
aacaacaatt	gcattcattt	tatgtttcag	gttcaggggg	aggtgtggga	ggttttttaa	14820
agcaagtaaa	acctctacaa	atgtggtaaa	atcgataccg	tcgacctcga	ctagagcggc	14880
cactaacata	cgctctccat	caaaacaaaa	cgaaacaaaa	caaactagca	aaataggctg	14940
tccccagtgc	aagtgcaggt	gccagaacat	ttctctatcg	ataggtaccg	agctcttacg	15000
cgtgctagcc	ctcgagcagg	atctatacat	tgaatcaata	ttggcaatta	gccatattag	15060
tcattggtta	tatagcataa	atcaatattg	gctattggcc	attgcatacg	ttgtatctat	15120
atcataatat	gtacatttat	attggctcat	gtccaatatg	accgccatgt	tgacattgat	15180
tattgactag	ttattaatag	taatcaatta	cggggtcatt	agttcatagc	ccatatatgg	15240
agttccgcgt	tacataactt	acggtaaatg	gcccgcctgg	ctgaccgccc	aacgaccccc	15300
gcccattgac	gtcaataatg	acgtatgttc	ccatagtaac	gccaataggg	actttccatt	15360
gacgtcaatg	ggtggagtat	ttacggtaaa	ctgcccactt	ggcagtacat	caagtgtatc	15420
atatgccaag	tccgcccct	attgacgtca	atgacggtaa	atggcccgcc	tggcattatg	15480
cccagtacat	gaccttacgg	gactttccta	cttggcagta	catctacgta	ttagtcatcg	15540
ctattaccat	ggtgatgcgg	ttttggcagt	acatcaatgg	gcgtggatag	cggtttgact	15600
cacggggatt	tccaagtctc	caccccattg	acgtcaatgg	gagtttgttt	tggcaccaaa	15660
atcaacggga	ctttccaaaa	tgtcgtaaca	actccgcccc	attgacgcaa	atgggcggta	15720
ggcgtgtacg	gtgggaggtc	tatataagca	gagctcgttt	agtgaaccgt	cagatcgcct	15780
ggagacgcca	tccacgctgt	tttgacctcc	atagaagaca	ccgggaccga	tccagcctcc	15840
cctcgaagct	cgactctagg	ggctcgagat	ctgcgatcta	agtaagcttg	catgcctgca	15900
ggtcggccgc	cacgaccggt	gccgccacca	tcccctgacc	cacgcccctg	acccctcaca	15960
aggagacgac	cttccatgac	cgagtacaag	cccacggtgc	gcctcgccac	ccgcgacgac	16020
gtcccccggg	ccgtacgcac	cctcgccgcc	gcgttcgccg	actaccccgo	cacgcgccac	16080
accgtcgacc	cggaccgcca	catcgagcgg	gtcaccgago	tgcaagaact	cttcctcacg	16140
cgcgtcgggc	tcgacatcgg	caaggtgtgg	gtcgcggacg	acggcgccgc	ggtggcggtc	16200
tggaccacgc	cggagagcgt	cgaagcgggg	gcggtgttcg	ccgagatcgg	cccgcgcatg	16260

#### gccgagttga gcggttcccg gctggccgcg cagcaacaga tggaaggcct cctggcgccg caccggccca aggagcccgc gtggttcctg gccaccgtcg gcgtctcgcc cgaccaccag 16380 ggcaagggtc tgggcagcgc cgtcgtgctc cccggagtgg aggcggccga gcgcgccggg 16440 gtgcccgcct tcctggagac ctccgcgccc cgcaacctcc ccttctacga gcggctcggc 16500 ttcaccgtca ccgccgacgt cgaggtgccc gaaggaccgc gcacctggtg catgacccgc 16560 aagcccggtg cctgacgccc gccccacgac ccgcagcgcc cgaccgaaag gagcgcacga 16620 ccccatggct ccgaccgaag ccgacccggg cggccccgcc gaccccgcac ccgcccccga 16680 ggcccaccga ctctagagtc ggggcggccg gccgcttcga gcagacatga taagatacat 16740 tgatgagttt ggacaaacca caactagaat gcagtgaaaa aaatgcttta tttgtgaaat 16800 16860 ttgtgatgct attgctttat ttgtaaccat tataagctgc aataaacaag ttaacaacaa caattgcatt cattttatgt ttcaggttca gggggaggtg tgggaggttt tttaaagcaa 16920 gtaaaacctc tacaaatgtg gtaaaatcga taaggatcaa ttcggcttca ggtaccgtcg 16980 17040 acgatgtagg tcacggtctc gaagccgcgg tgcgggtgcc agggcgtgcc cttgggctcc ccgggcgcgt actccacctc acccatctgg tccatcatga tgaacgggtc gaggtggcgg 17100 tagttgatcc cggcgaacgc gcggcgcacc gggaagccct cgccctcgaa accgctgggc 17160 gcggtggtca cggtgagcac gggacgtgcg acggcgtcgg cgggtgcgga tacgcggggc 17220 agcgtcagcg ggttctcgac ggtcacggcg ggcatgtcga cagccgaatt gatccgtcga 17280 ccgatgccct tgagagcctt caacccagtc agctccttcc ggtgggcgcg gggcatgact 17340 atcgtcgccg cacttatgac tgtcttcttt atcatgcaac tcgtaggaca ggtgccggca 17400 17402 gc 9 <210> 5172 DNA Plasmid pRSV-Int <213> <400> ctgcattaat gaatcggcca acgcgcgggg agaggcggtt tgcgtattgg gcgctcttcc 60 gcttcctcgc tcactgactc gctgcgctcg gtcgttcggc tgcggcgagc ggtatcagct 120 cactcaaagg cggtaatacg gttatccaca gaatcagggg ataacgcagg aaagaacatg 180 tgagcaaaag gccagcaaaa ggccaggaac cgtaaaaagg ccgcgttgct ggcgtttttc 240 cataggctcc gccccctga cgagcatcac aaaaatcgac gctcaagtca gaggtggcga 300 aacccgacag gactataaag ataccaggcg tttccccctg gaagctccct cgtgcgctct 360 cctgttccga ccctgccgct taccggatac ctgtccgcct ttctcccttc gggaagcgtg 420 gcgctttctc aatgctcacg ctgtaggtat ctcagttcgg tgtaggtcgt tcgctccaag 480

025CIP SEQ List.txt

16320

540 ctgggctgtg tgcacgaacc ccccgttcag cccgaccgct gcgccttatc cggtaactat 600 cgtcttgagt ccaacccggt aagacacgac ttatcgccac tggcagcagc cactggtaac aggattagca gagcgaggta tgtaggcggt gctacagagt tcttgaagtg gtggcctaac 660 tacggctaca ctagaaggac agtatttggt atctgcgctc tgctgaagcc agttaccttc 720 ggaaaaagag ttggtagctc ttgatccggc aaacaaacca ccgctggtag cggtggtttt 780 tttgtttgca agcagcagat tacgcgcaga aaaaaaggat ctcaagaaga tcctttgatc 840 ttttctacgg ggtctgacgc tcagtggaac gaaaactcac gttaagggat tttggtcatg 900 agattatcaa aaaggatctt cacctagatc cttttaaatt aaaaatgaag ttttaaatca 960 atctaaagta tatatgagta aacttggtct gacagttacc aatgcttaat cagtgaggca 1020 1080 cctatctcag cgatctgtct atttcgttca tccatagttg cctgactccc cgtcgtgtag ataactacga tacgggaggg cttaccatct ggccccagtg ctgcaatgat accgcgagac 1140 1200 ccacgctcac cggctccaga tttatcagca ataaaccagc cagccggaag ggccgagcgc agaagtggtc ctgcaacttt atccgcctcc atccagtcta ttaattgttg ccgggaagct 1260 agagtaagta gttcgccagt taatagtttg cgcaacgttg ttgccattgc tacaggcatc 1320 gtggtgtcac gctcgtcgtt tggtatggct tcattcagct ccggttccca acgatcaagg 1380 cgagttacat gatcccccat gttgtgcaaa aaagcggtta gctccttcgg tcctccgatc 1440 gttgtcagaa gtaagttggc cgcagtgtta tcactcatgg ttatggcagc actgcataat 1500 tctcttactg tcatgccatc cgtaagatgc ttttctgtga ctggtgagta ctcaaccaag 1560 tcattctgag aatagtgtat gcggcgaccg agttgctctt gcccggcgtc aatacgggat 1620 1680 aataccgcgc cacatagcag aactttaaaa gtgctcatca ttggaaaacg ttcttcgggg cgaaaactct caaggatctt accgctgttg agatccagtt cgatgtaacc cactcgtgca 1740 cccaactgat cttcagcatc ttttactttc accagcgttt ctgggtgagc aaaaacagga 1800 aggcaaaatg ccgcaaaaaa gggaataagg gcgacacgga aatgttgaat actcatactc 1860 1920 ttcctttttc aatattattg aagcatttat cagggttatt gtctcatgag cggatacata tttgaatgta tttagaaaaa taaacaaata ggggttccgc gcacatttcc ccgaaaagtg 1980 ccacctgacg tcgacggatc gggagatctc ccgatcccct atggtcgact ctcagtacaa 2040 tctgctctga tgccgcatag ttaagccagt atctgctccc tgcttgtgtg ttggaggtcg 2100 ctgagtagtg cgcgagcaaa atttaagcta caacaaggca aggcttgacc gacaattgca 2160 tgaagaatct gcttagggtt aggcgttttg cgctgcttcg cgatgtacgg gccagatata 2220 cgcgtgctag gggtctagga tcgattctag gaattctcta gccgcggtct agggatcccg 2280 gcgcgtatgg tgcactctca gtacaatctg ctctgatgcc gcatagttaa gccagtatct 2340 gctccctgct tgtgtgttgg aggtcgctga gtagtgcgcg agcaaaattt aagctacaac 2400 Page 39

aaggcaaggc	ttgaccgaca	attgcatgaa	gaatctgctt	agggttaggc	gttttgcgct	2460
gcttcgcgat	gtacgggcca	gatatacgcg	tatctgaggg	gactagggtg	tgtttaggcg	2520
aaaagcgggg	cttcggttgt	acgcggttag	gagtcccctc	aggatatagt	agtttcgctt	2580
ttgcataggg	agggggaaat	gtagtcttat	gcaatacact	tgtagtcttg	caacatggta	2640
acgatgagtt	agcaacatgc	cttacaagga	gagaaaaagc	accgtgcatg	ccgattggtg	2700
gaagtaaggt	ggtacgatcg	tgccttatta	ggaaggcaac	agacaggtct	gacatggatt	2760
ggacgaacca	ctgaattccg	cattgcagag	ataattgtat	ttaagtgcct	agctcgatac	2820
aataaacgcc	atttgaccat	tcaccacatt	ggtgtgcacc	tccaagcttg	catgcctgca	2880
ggtaccggtc	cggaattccc	gggtcgacga	gctcactagt	cgtagggtcg	ccgacatgac	2940
acaaggggtt	gtgaccgggg	tggacacgta	cgcgggtgct	tacgaccgtc	agtcgcgcga	3000
gcgcgagaat	tcgagcgcag	caagcccagc	gacacagcgt	agcgccaacg	aagacaaggc	3060
ggccgacctt	cagcgcgaag	tcgagcgcga	cgggggccgg	ttcaggttcg	tcgggcattt	3120
cagcgaagcg	ccgggcacgt	cggcgttcgg	gacggcggag	cgcccggagt	tcgaacgcat	3180
cctgaacgaa	tgccgcgccg	ggcggctcaa	catgatcatt	gtctatgacg	tgtcgcgctt	3240
ctcgcgcctg	aaggtcatgg	acgcgattcc	gattgtctcg	gaattgctcg	ccctgggcgt	3300
gacgattgtt	tccactcagg	aaggcgtctt	ccggcaggga	aacgtcatgg	acctgattca	3360
cctgattatg	cggctcgacg	cgtcgcacaa	agaatcttcg	ctgaagtcgg	cgaagattct	3420
cgacacgaag	aaccttcagc	gcgaattggg	cgggtacgtc	ggcgggaagg	cgccttacgg	3480
cttcgagctt	gtttcggaga	cgaaggagat	cacgcgcaac	ggccgaatgg	tcaatgtcgt	3540
catcaacaag	cttgcgcact	cgaccactcc	ccttaccgga	cccttcgagt	tcgagcccga	3600
cgtaatccgg	tggtggtggc	gtgagatcaa	gacgcacaaa	caccttccct	tcaagccggg	3660
cagtcaagcc	gccattcacc	cgggcagcat	cacggggctt	tgtaagcgca	tggacgctga	3720
cgccgtgccg	acccggggcg	agacgattgg	gaagaagacc	gcttcaagcg	cctgggaccc	3780
ggcaaccgtt	atgcgaatcc	ttcgggaccc	gcgtattgcg	ggcttcgccg	ctgaggtgat	3840
ctacaagaag	aagccggacg	gcacgccgac	cacgaagatt	gagggttacc	gcattcagcg	3900
cgacccgatc	acgctccggc	cggtcgagct	tgattgcgga	ccgatcatcg	agcccgctga	3960
gtggtatgag	cttcaggcgt	ggttggacgg	cagggggcgc	ggcaaggggc	tttcccgggg	4020
gcaagccatt	ctgtccgcca	tggacaagct	gtactgcgag	tgtggcgccg	tcatgacttc	4080
gaagcgcggg	gaagaatcga	tcaaggactc	ttaccgctgc	cgtcgccgga	aggtggtcga	4140
cccgtccgca	cctgggcagc	acgaaggcac	gtgcaacgtc	agcatggcgg	cactcgacaa	4200
gttcgttgcg	gaacgcatct	tcaacaagat	caggcacgcc	gaaggcgacg	aagagacgtt	4260

OREGIN COOLINE AND	
025CIP SEQ List.txt ggcgcttctg tgggaagccg cccgacgctt cggcaagctc actgaggcgc ctgagaagag	4320
cggcgaacgg gcgaaccttg ttgcggagcg cgccgacgcc ctgaacgccc ttgaagagct	4380
gtacgaagac cgcgcggcag gcgcgtacga cggacccgtt ggcaggaagc acttccggaa	4440
gcaacaggca gcgctgacgc tccggcagca aggggcggaa gagcggcttg ccgaacttga	4500
agccgccgaa gccccgaagc ttccccttga ccaatggttc cccgaagacg ccgacgctga	4560
cccgaccggc cctaagtcgt ggtgggggcg cgcgtcagta gacgacaagc gcgtgttcgt	4620
cgggctcttc gtagacaaga tcgttgtcac gaagtcgact acgggcaggg ggcagggaac	4680
gcccatcgag aagcgcgctt cgatcacgtg ggcgaagccg ccgaccgacg acgacgaaga	4740
cgacgcccag gacggcacgg aagacgtagc ggcgtagcga gacacccgga tccctcgagg	4800
ggccctattc tatagtgtca cctaaatgct agagctcgct gatcagcctc gactgtgcct	4860
tctagttgcc agccatctgt tgtttgcccc tcccccgtgc cttccttgac cctggaaggt	4920
gccactccca ctgtcctttc ctaataaaat gaggaaattg catcgcattg tctgagtagg	4980
tgtcattcta ttctgggggg tggggtgggg caggacagca aggggggagga ttgggaagac	5040
aatagcaggc atgctgggga tgcggtgggc tctatggctt ctgaggcgga aagaaccagg	5100
tgcccagtca tagccgaata gcctctccac ccaagcggcc ggagaacctg cgtgcaatcc	5160
actgggggcg cg	5172
<210> 10 <211> 6233 <212> DNA <213> Plasmid pCR-XL-TOPO-CMV-pur-attB	
<400> 10 agcgcccaat acgcaaaccg cctctccccg cgcgttggcc gattcattaa tgcagctggc	60
acgacaggtt tcccgactgg aaagcgggca gtgagcgcaa cgcaattaat gtgagttagc	120
tcactcatta ggcaccccag gctttacact ttatgcttcc ggctcgtatg ttgtgtggaa	180
ttgtgagcgg ataacaattt cacacaggaa acagctatga ccatgattac gccaagctat	240
ttaggtgacg cgttagaata ctcaagctat gcatcaagct tggtaccgag ctcggatcca	300
ctagtaacgg ccgccagtgt gctggaattc gcccttggcc gcaataaaat atctttattt	360
tcattacatc tgtgtgttgg ttttttgtgt gaatcgatag tactaacata cgctctccat	420
caaaacaaaa cgaaacaaaa caaactagca aaataggctg tccccagtgc aagtgcaggt	480
gccagaacat ttctctatcg ataggtaccg agctcttacg cgtgctagcc ctcgagcagg	540
atctatacat tgaatcaata ttggcaatta gccatattag tcattggtta tatagcataa	600
atcaatattg gctattggcc attgcatacg ttgtatctat atcataatat gtacatttat	660
attggctcat gtccaatatg accgccatgt tgacattgat tattgactag ttattaatag	720

#### 025CIP SEQ List.txt 780 taatcaatta cggggtcatt agttcatagc ccatatatgg agttccgcgt tacataactt acggtaaatg gcccgcctgg ctgaccgccc aacgaccccc gcccattgac gtcaataatg 840 acgtatgttc ccatagtaac gccaataggg actttccatt gacgtcaatg ggtggagtat 900 960 ttacggtaaa ctgcccactt ggcagtacat caagtgtatc atatgccaag tccgcccct attgacgtca atgacggtaa atggcccgcc tggcattatg cccagtacat gaccttacgg 1020 1080 gactttccta cttggcagta catctacgta ttagtcatcg ctattaccat ggtgatgcgg ttttggcagt acatcaatgg gcgtggatag cggtttgact cacggggatt tccaagtctc 1140 1200 caccccattg acgtcaatgg gagtttgttt tggcaccaaa atcaacggga ctttccaaaa tgtcgtaaca actccgcccc attgacgcaa atgggcggta ggcgtgtacg gtgggaggtc 1260 1320 tatataagca gagctcgttt agtgaaccgt cagatcgcct ggagacgcca tccacgctgt tttgacctcc atagaagaca ccgggaccga tccagcctcc cctcgaagct cgactctagg 1380 1440 ggctcgagat ctgcgatcta agtaagcttg catgcctgca ggtcggccgc cacgaccggt 1500 gccgccacca tcccctgacc cacgcccctg acccctcaca aggagacgac cttccatgac cgagtacaag cccacggtgc gcctcgccac ccgcgacgac gtcccccggg ccgtacgcac 1560 1620 cctcgccgcc gcgttcgccg actaccccgc cacgcgccac accgtcgacc cggaccgcca 1680 catcgagcgg gtcaccgagc tgcaagaact cttcctcacg cgcgtcgggc tcgacatcgg caaggtgtgg gtcgcggacg acggcgccgc ggtggcggtc tggaccacgc cggagagcgt 1740 1800 cgaagcgggg gcggtgttcg ccgagatcgg cccgcgcatg gccgagttga gcggttcccg 1860 gctggccgcg cagcaacaga tggaaggcct cctggcgccg caccggccca aggagcccgc 1920 gtggttcctg gccaccgtcg gcgtctcgcc cgaccaccag ggcaagggtc tgggcagcgc 1980 cgtcgtgctc cccggagtgg aggcggccga gcgcgccggg gtgcccgcct tcctggagac 2040 ctccgcgccc cgcaacctcc ccttctacga gcggctcggc ttcaccgtca ccgccgacgt 2100 cgaggtgccc gaaggaccgc gcacctggtg catgacccgc aagcccggtg cctgacgccc 2160 gccccacgac ccgcagcgcc cgaccgaaag gagcgcacga ccccatggct ccgaccgaag 2220 ccgacccggg cggccccgcc gaccccgcac ccgcccccga ggcccaccga ctctagagtc ggggcggccg gccgcttcga gcagacatga taagatacat tgatgagttt ggacaaacca 2280 caactagaat gcagtgaaaa aaatgcttta tttgtgaaat ttgtgatgct attgctttat 2340 ttgtaaccat tataagctgc aataaacaag ttaacaacaa caattgcatt cattttatgt 2400 ttcaggttca gggggaggtg tgggaggttt tttaaagcaa gtaaaacctc tacaaatgtg 2460 gtaaaatcga taaggatcaa ttcggcttca ggtaccgtcg acgatgtagg tcacggtctc 2520 gaagccgcgg tgcgggtgcc agggcgtgcc cttgggctcc ccgggcgcgt actccacctc 2580 2640 acccatctgg tccatcatga tgaacgggtc gaggtggcgg tagttgatcc cggcgaacgc Page 42

gcggcgcacc	gggaagccct	cgccctcgaa	accgctgggc	gcggtggtca	cggtgagcac	2700
			tacgcggggc			2760
			gatccgtcga			2820
			gggcatgact			2880
			ggtgccggca			2940
			tgcggcgagc			3000
			ataacgcagg			3060
			tcgagcatgc			3120
			ccgtcgtttt			3180
			cagcacatcc			3240
			cccaacagtt			3300
					gatgtacaga	3360
					gcacgtctgc	3420
					gaaagctggc	3480
					gaagtggctg	3540
					tggggaatat	3600
					acgtagaaag	3660
					atctggacaa	3720
					a tggcgatagc	3780
					g gcgccctctg	3840
					a aggatctgat	3900
					c atgattgaac	3960
					c ggctatgact	4020
					a gcgcaggggc	4080
					g caagacgagg	4140
					g ctcgacgttg	4200
					g gatctcctgt	4260
					g cggcggctgc	4320
					c atcgagcgag	4380
					a gagcatcagg	4440
					c ggcgaggatc	4500

tcgtcgtgac ccatggcgat gcctgcttgc cgaatatcat ggtggaaa ctggattcat cgactgtggc cggctgggtg tggcggaccg ctatcagg	
ctacccgtga tattgctgaa gagcttggcg gcgaatgggc tgaccgct	
acggtatcgc cgctcccgat tcgcagcgca tcgccttcta tcgccttc	
tctgaattat taacgcttac aatttcctga tgcggtattt tctcctta	
gtatttcaca ccgcatacag gtggcacttt tcggggaaat gtgcgcgg	
tttattttc taaatacatt caaatatgta tccgctcatg agacaata	
gcttcaataa tagcacgtga ggagggccac catggccaag ttgaccag	
gctcaccgcg cgcgacgtcg ccggagcggt cgagttctgg accgaccg	
ccgggacttc gtggaggacg acttcgccgg tgtggtccgg gacgacgt	
cagcgcggtc caggaccagg tggtgccgga caacaccctg gcctgggt	
cctggacgag ctgtacgccg agtggtcgga ggtcgtgtcc acgaactt	
cgggccggcc atgaccgaga tcggcgagca gccgtggggg cgggagtt	ccg ccctgcgcga 5280
cccggccggc aactgcgtgc acttcgtggc cgaggagcag gactgaca	acg tgctaaaact 5340
tcatttttaa titaaaagga tctaggtgaa gatccttttt gataatct	cca tgaccaaaat 5400
cccttaacgt gagttttcgt tccactgagc gtcagacccc gtagaaaa	aga tcaaaggatc 5460
ttcttgagat ccttttttc tgcgcgtaat ctgctgcttg caaacaa	aaa aaccaccgct 5520
accageggtg gtttgtttge eggateaaga getaccaact ettttee	cga aggtaactgg 5580
cttcagcaga gcgcagatac caaatactgt ccttctagtg tagccgta	agt taggccacca 5640
cttcaagaac tctgtagcac cgcctacata cctcgctctg ctaatcc	tgt taccagtggc 5700
tgctgccagt ggcgataagt cgtgtcttac cgggttggac tcaagac	gat agttaccgga 5760
taaggcgcag cggtcgggct gaacgggggg ttcgtgcaca cagccca	gct tggagcgaac 5820
gacctacacc gaactgagat acctacagcg tgagctatga gaaagcg	cca cgcttcccga 5880
agggagaaag gcggacaggt atccggtaag cggcagggtc ggaacag	gag agcgcacgag 5940
ggagcttcca gggggaaacg cctggtatct ttatagtcct gtcgggt	ttc gccacctctg 6000
acttgagcgt cgatttttgt gatgctcgtc aggggggggg agcctat	gga aaaacgccag 6060
caacgcggcc tttttacggt tcctgggctt ttgctggcct tttgctc	aca tgttctttcc 6120
tgcgttatcc cctgattctg tggataaccg tattaccgcc tttgagt	gag ctgataccgc 6180
tcgccgcagc cgaacgaccg agcgcagcga gtcagtgagc gaggaag	cgg aag 6233

<sup>&</sup>lt;210> 11 <211> 234 <212> DNA <213> artificial

<220> <223>	attP containing polynucleotide	
<400> gactagt	11 cact gacggacaca ccgaagcccc ggcggcaacc ctcagcggat gccccggggc	60
ttcacgt	ttt cccaggtcag aagcggtttt cgggagtagt gccccaactg gggtaacctt	120
tgagtto	tct cagttggggg cgtagggtcg ccgacatgac acaaggggtt gtgaccgggg	180
tggacac	gta cgcgggtgct tacgaccgtc agtcgcgcga gcgcgactag taca	234
<210> <211> <212> <213>	12 26 DNA artificial	
<220> <223>	Primer attB-for	
<400> taccgto	12 cgac gatgtaggtc acggtc	26
<400>	13	
Cys Gly	y Gly Pro Lys Lys Lys Arg Lys Val Gly 5 10	
<210> <211> <212> <213>	13 20 DNA Artificial sequence	
<220> <223>	Lys051	